

WORLD OF WATCHES

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#38 AUTUMN 2017



HEAVENLY HOURS

12 watches charting the heavens

MOONSHOT

Examining the quixotic charm of the moon phase

PERPETUAL MOTION

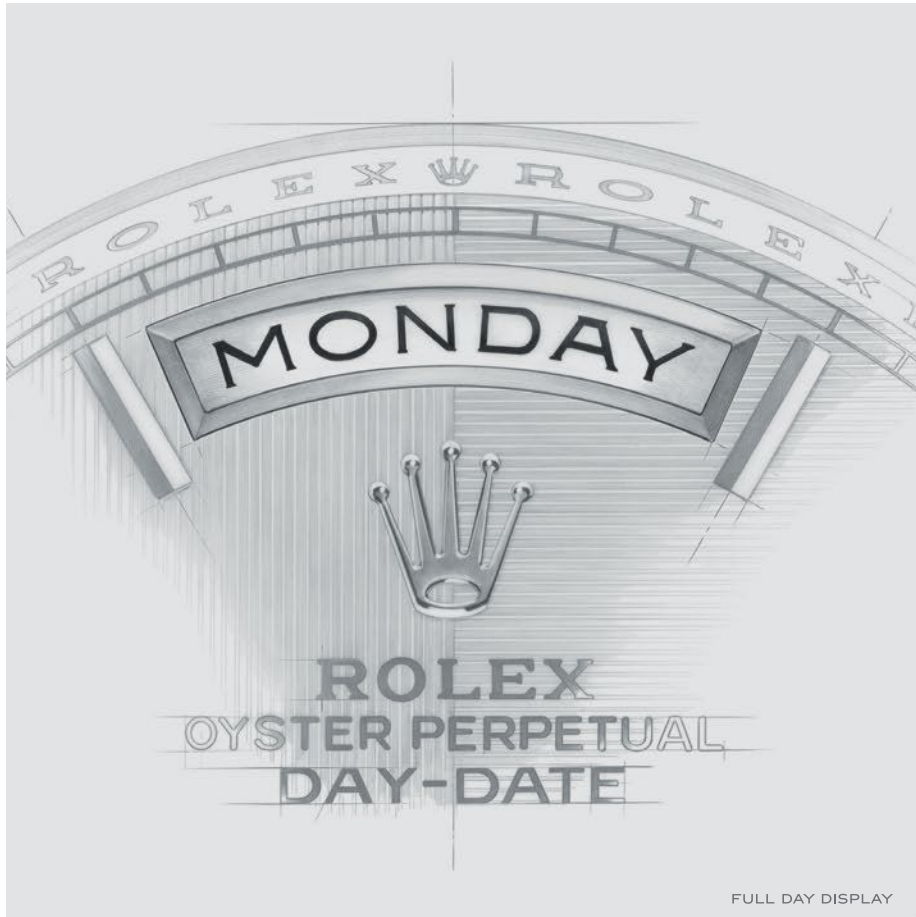
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- Special report on Glashütte watchmaking
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Erratum On page 104 of WOW #37 Summer 2017, we cited the Rolex "DateJust 41". The correct spelling is "Datejust 41".

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THEM.

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LE BRASSUS. THE EARLY WATCHMAKERS WERE
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CONSTANTLY CHALLENGE THE CONVENTIONS OF
FINE WATCHMAKING.



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CALENDAR
IN STAINLESS STEEL

AUDEMARS PIGUET
Le Brassus

AUDEMARS PIGUET BOUTIQUE:
STARHILL GALLERY: ADORN FLOOR

Contributors



Greenplasticsoldiers

PHOTOGRAPHER

Photography has taken this jovial shutterbug to more places than he cares to remember, but Singapore's best watch and lifestyle photographer still prefers the comfort of his own home. The proud father of three enjoys nothing more than spending quality time with his wife and children, who are the darling subjects of all of his cameras from DSLRs to Polaroids and iPhones.



Ruckdee Chotjinda

EDITOR/WATCH COLLECTOR

Currently a staff member of WOW Thailand, Ruckdee refused to write about watches until a few years ago, when he became sure that he could expound the subject of his passion with absolute objectivity and integrity. He is always excited by watches with reserved designs and flawless symmetries, and has a soft spot for moon phase watches, which form a sizeable part of his collection.



Joshua Yap

CONTRIBUTING EDITOR

Joshua admittedly wasn't inducted into the world of watches (pun not intended) by choice, but he was smitten by its mechanical wonders in no time. Although he personally favours modestly sized, no-nonsense timepieces, he sometimes misses the outrageous mind-bogglers of the pre-Credit Crunch years. As he dreams of owning a modern haute horlogerie watch one day, he's currently content scouring the Internet for vintage value buys.



Evon Chng

FASHION STYLIST

Evon is a workaholic and stylist (in that order) based in Singapore, who accidentally landed herself a career in fashion after a stint as an intern at a film company. Eight years on, she has contributed to various local and international publications by producing editorial content, fashion spreads, and cover images. She's currently the deputy fashion director of *L'Officiel Singapore*.



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TUDOR

EVERYTHING'S RELATIVE

Welcome to a slightly different opening note this issue. Normally, we spend a little time musing on the contents of the issue at hand, as a kind of prologue, if you will. However, I want to address two seemingly unrelated points: the Fondation de la Haute Horlogerie (FHH) White Paper on establishing fine watchmaking guidelines and relativity. This issue is our technical tour de force for the year so what better moment to pull out all the stops on difficult subjects.

The FHH has been talking up its White Paper for the bulk of this year, finally making it to Asia in the last couple of months. Briefly, the paper uses very specific and well thought out criteria to define where each of the myriad brands in watchmaking (mainly Swiss) stood in relation to each other. Establishing such hierarchies obviously comes with built-in difficulties, but it does make it easy to bring relativity into it!


Any grouping of brands throws the position of each into sharp relief, which may create false equivalences in the mind of consumers. To illustrate, I draw your attention to one of the groupings the FHH has created, historic maisons; there are four such groupings, Contemporary Brands, Luxury Brands, Artisan-Creators being the others.

Cartier is considered a Historic Maison and so is Vacheron Constantin and Patek Philippe. No issue there, but Rolex and A. Lange & Söhne are also in the same group – these two brands clearly don't belong in the same space and an uninformed observer may well see an equivalence between the two that does not exist. For my part, I think this is where magazines like this one have a part to play because we have the space and the environment to present all these disparate brands together. All we need is the time, but I digress.

Absent from the FHH list altogether are Longines and Tissot, and every Japanese name. This gets to the heart of the matter – no matter how well meaning such classifications are, people are

bound to take issue. Also, many names in watchmaking have a strong history but are very different to what they used to be. Just take Breguet, Van Cleef & Arpels, and Jaquet Droz as cases in point. There are, of course, many such examples. To a novice – the intended audience of the FHH – this may be less than helpful but, as the FHH puts it, the idea is to start somewhere and to help novices start somewhere.

Once again, resolving the relative gravity of each brand, and the weight of each one's watchmaking capabilities, is exactly what magazines like this one do best. The FHH has put some guidelines for us all to consider and debate, and that is exactly what we should do. To be clear, what is needed – still – is information and the right sorts of curators. By curators, of course, I mean watch specialists, whether they are editors, journalists or collectors.

As long as we practice epistemic responsibility, and are given the appropriate time to parse the data, I'm certain we have an important role to play in this discussion. 



Ashok Soman, managing editor





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EFFORTS BEARING FRUIT

Three quarters into 2017 and already the watch market has shown signs of good recovery. We are glad to observe that watch retailers execute much activities to promote retail and we are also glad that the buying public is responding well. This is especially evident in the period when the latest timepieces announced at SIHH and Baselworld 2017 have begun to appear on our shores therefore kicking off marketing and promotional efforts by the respective retailers targeted towards their customers. It is a good time of the year and for many, it is the first time to be able to physically discover the new timepieces and decide on the year's purchases. Have you checked out your favourite retailers? Have you explored our pages and thought up a wish list with which to delve into further? Now is as good a time as any!

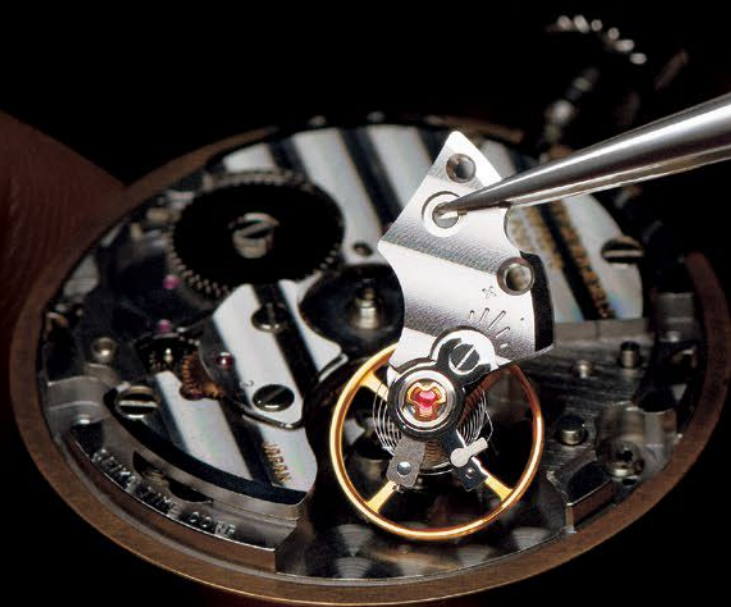
On another note, Heart Media continues to grow quickly especially on the digital side. Our new digital platform, www.Luxuo.my will be the main conduit with which we, World of Watches, send out the quickest and latest happenings, news and launches. Luxuo.my exists on web, Facebook and Instagram so we call for the same kind support for it as World of Watches has. We will ensure that your efforts and time is duly rewarded. This appeal is also sent out to our beloved clients. It is one more channel with which we can properly support our corporate customers and sponsors thus providing even greater value to them. As such, we will spare no effort in ensuring that Luxuo.my becomes the perfect complement to the World of Watches publication. In this, we must act positively to differentiate the pairing of Luxuo.my and World of Watches from the multitude of seemingly similar pairings in the market today. Rest assured, we shall succeed in this endeavour.

Last but not least, a big shout out to our loyal subscribers. You are one of the main reasons why we are the number watch publication in the region. It has always been heartwarming and welcome to be able to meet up with you at local events and we hope for your continued support. Please tell your friends and loved ones about us. Thank you from the bottom of our hearts! 



Kelvin Tan, Associate Publisher





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HEAVENLY STRIKES

A. Lange & Söhne's Zeitwerk Decimal Strike emboldens us with each knock on its crystal clear gongs WORDS KELVIN TAN



It seemed only yesterday when the original A. Lange & Söhne Zeitwerks first appeared on our radar. And since that time, these watches have made a huge impression on the watch community. For many, they were ultra-desirable timepieces that no watch collector could live without. One is not wrong to call them instant classics.

So here comes the Zeitwerk Decimal Strike, the topic of our cover story in this issue. While we discuss there in greater depth how this model differentiates itself from its older siblings, let us give you a sneak peek before you delve further into our latest issue. What's the watch all about? The Zeitwerk Decimal Strike has a mechanical movement powering a digital display (Arabic numbers seen through apertures on a dial) to tell time instead of hands pointing to markers

as normally seen in most mechanical watches. But that alone is not enough for a Lange watch. The Decimal Strike also audibly informs the user of the time by the striking mechanisms, en passant, every passing hour and every passing 10-minute interval. In a way, one can say that the Zeitwerk is perhaps A. Lange & Söhne's effort to make a great connection between the sounds produced by the timepiece and its iconic digital display. Already this differentiates the watch from the others within the brand's stable of amazing timepieces.

However, this Zeitwerk still contains more secrets. Powered by the in-house caliber L043.7, the Decimal Strike houses a constant force mechanism, a remontoir d'égalité that feeds a constant flow of force to the balance wheel of the watch. What does all of this mean? Learn more about the Zeitwerk Decimal Strike inside! **W**

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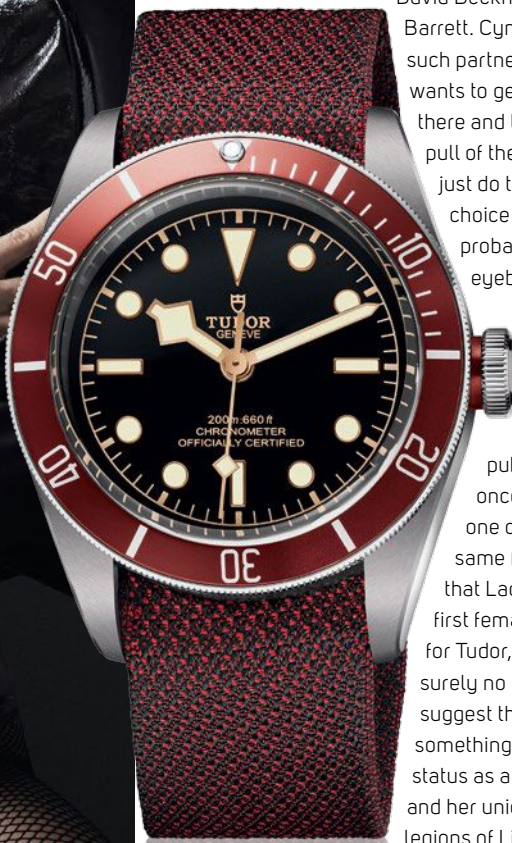


Nothing's Shocking

Tudor appoints Lady Gaga as its first female ambassador in a move that brings two great mottos together

The singer/songwriter/performance artist/force of nature Lady Gaga is perhaps a near-perfect choice for Tudor, given that the brand today trades on its words "Born to Dare". Lady Gaga herself is proudly associated with her own words, "Born This Way", and the two mottos work well together. For that alone, we salute them. This isn't a tale of a simple ambassadorship though, mainly because Tudor is new to the friend-of-the-brand gig and Mother Monster needs to endorse no one. In fact, she is only the third person pulling ambassadorial duties for Tudor, the others being

David Beckham and Beauden Barrett. Cynics might decry such partnerships but Tudor wants to get its name out there and the gravitational pull of these stars might just do the trick. The choice of Lady Gaga probably raised some eyebrows, especially since she is no longer quite the provocateur nor does she dominate the public sphere as she once did. Then again, one could argue the same for Becks. Given that Lady Gaga is the first female ambassador for Tudor, the choice is surely no accident. We suggest that it might have something to do with Gaga's status as a timeless icon, and her unique appeal to her legions of Little Monsters... 



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Return to Form

The Swiss watch industry is not out of the woods yet, but the Swatch Group's half-year report card for 2017 makes the case for optimism

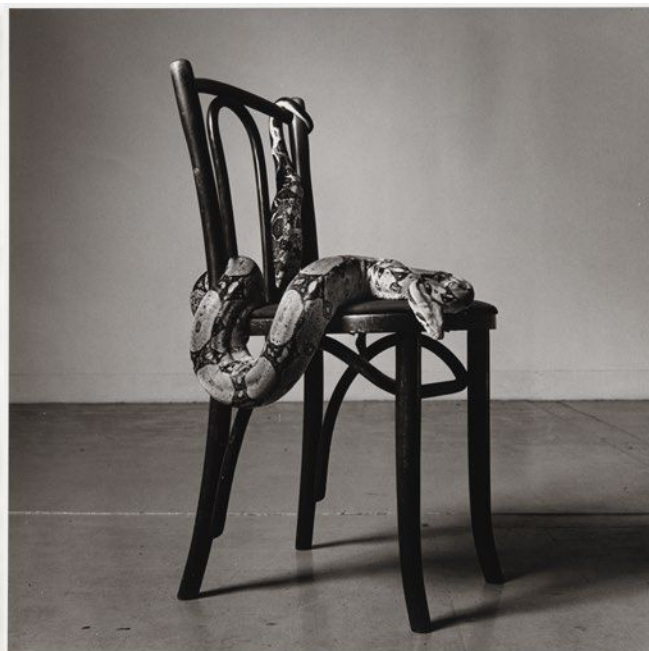
When you are the largest watchmaking group in the world, pundits pay close attention to report card news. The Swatch Group released its half-year 2017 report recently and everyone breathed a sigh of relief that it wasn't more bad news. Actually, the news is not too bad at all, with CEO Nick Hayek putting it this way: "The first two and a half months of 2017 showed strong growth, particularly in Asia." Group net sales inched up 1.2 per cent in total (for all its businesses) while the watch and jewellery segment posted sales growth of 2.9 per cent. We lauded the company for its decision not to cut staff as the current crisis dragged on and this result is more than a little gratifying, even as outside observers. The Group credited a resurgence in demand from Asia, especially China, with the performance, and says it has a positive outlook for the second half of 2017. **W**

Tanked Up

Cartier celebrates the 100th anniversary of the iconic Tank watch with a number of variations on classic themes – and one idiosyncratic version




Our form watch story last issue was meant, at least partly, as a celebration of the 100th anniversary of the world's most famous and successful tank-inspired watch. The first Tank rolled out of Louis Cartier's imagination in 1917, a trueborn wristwatch that foreshadowed the rise of this new style in watchmaking. There is a famous story that the Tank watch was inspired by what was then a new sight: the tank. According to Cartier, Louis actually presented one of the very first Tank watches to General John Pershing, commander of the American Expeditionary Force in Europe during World War I. Truly, its beauty was such that Rudolph Valentino mandated that he would wear the watch in *The Son of the Sheik* in 1926, despite the incongruity of such a move. Since the first commercial models of 1919, Cartier has released no less than six different families of Tank watches, showcasing the design strengths and flexibility of the Tank shape. For the 100th anniversary, Cartier debuts new models in the Tank Louis Cartier, Tank Américaine, and Tank Française ranges. For our part, we are most intrigued by the Tank Cintrée Skeleton, which features the beautiful Calibre 9917 MC. Unlike most Tank variants, this one skips out on the Roman numerals, which itself is noteworthy. **W**



Snake Eyes

Bulgari introduces the public in Singapore to the true history of its serpent motifs via *SerpentiForm: Snake Through Art, Jewellery and Design*

Bulgari slithered into the ArtScience Museum in Singapore on 19 August with an exhibition called *SerpentiForm: Snake Through Art, Jewellery and Design*. Ongoing and open to the public till 15 October, the exhibition wraps itself around the serpent motif so intricately linked with Bulgari. Given how strongly the serpent figures in the Roman brand's creations, it might surprise the public that the serpent only began appearing in Bulgari pieces in the late 1940s, or roughly a century after the brand got its start in 1844. Watch enthusiasts will no doubt be thrilled to learn that for all Bulgari's history in jewellery, the bracelet-watch marked the birth of the Serpenti. Then as now, the form was that of a coiled snake, sometimes encrusted with jewels.

"To Bulgari, the snake's livery is a field of unceasing experimentation. I wanted to show how [the exhibition] could be transversely stimulating," says Bulgari brand and heritage curator Lucia Boscaini. Unlike the 2016 showing of *SerpentiForm* in Rome, the Singapore edition is "on a much larger scale in terms of number of exhibits and scope, and the appearance of the serpent in myths and legends is much more explored, with an increased presence of Eastern artists, antiquities, and artworks." 



HOMETIME: GLASHÜTTE

Switzerland is the most famous watchmaking nation in the world, with Geneva arguably its capital. That being said, there is a tiny hamlet in Germany that rivals any Swiss region for its watchmaking pedigree: Glashütte

WORDS **ASHOK SOMAN**





The very first A. Lange & Söhne workshop in Glashütte

The story of German watchmaking is dominated by one word: Glashütte. To be sure, there is more to German watchmaking than this little town in Saxony, as fans of Sinn and Junghans will tell you, but the history and spirit of that little town are so powerful that people sometimes mistake it for a brand itself! Yes, people who become interested in beautiful timepieces recognise that Glashütte is a sort of brand but most don't realise just how true – and strange – that is.

We'll get back to those points later but first, an explanation for the genesis of this story is in order. Over the years, the editorial team of this magazine has visited Glashütte many times. Chances are, you have already read about A. Lange & Söhne and Glashütte Original many times in these pages, across Singapore, Malaysia, Thailand, Indonesia, Hong Kong, Vietnam, the Philippines, and Dubai. In many cases, the editors of the different editions have all travelled there, making it the only watchmaking centre outside Switzerland that we have all visited.

In my most recent trip – a day-trip that capped my BaselWorld experience this year – it dawned on me that it is quite odd that we've

only ever talked about A. Lange & Söhne and Glashütte Original in any detail. To be sure, this watchmaking region is far more than just those two names, famous though they are. Just a short stroll around the offices of those two brands will reveal quite a number of names, many of which have their own tales and their own takes on what fine watchmaking in Glashütte means. These are, in no particular order, Nomos Glashütte, Mühle-Glashütte, Tutima, and Moritz Grossmann, with retailer Wempe making its presence felt here too.

Of course, this begs the question: Why this little town of 7,000 people on the outskirts of Dresden? Also, what are they putting in the water to nurse such a strong commitment to watchmaking?

Seriously, we can't speak to the second question, but the answer to the first is well documented, sort of. Again, the main problem is that the region is best known for the virtues of its favourite sons, A. Lange & Söhne and Glashütte Original. Perhaps some collectors are not even aware that there was such a brand as Union Glashütte, which is now a part of the Swatch Group, just like Glashütte Original...



To begin with then, a history lesson...

Glashütte is a small and quiet town ensconced between Dresden, in Germany, and the Czech Republic. Indeed, this watchmaking hotspot in the Free State of Saxony is nowhere near Switzerland, unlike its French watchmaking counterpart, Franche-Comté. Glashütte though is arguably as famous as Geneva as far as watchmaking goes, and is certainly better known than the Vallée de Joux. The Glashütte watchmaking firms typically put the name Glashütte somewhere on the dial, if not as part of their own names, a practice alien to Vallée de Joux watchmakers such as Audemars Piguet, Blancpain, and Jaeger-LeCoultre.

Until the 18th century though, aside from the Dresden Watchmakers Guild (1668), Saxony had no watchmaking tradition to speak of. In fact, it was this very lack that spurred such watchmaking notables as Johann Heinrich Seyffert (1751-1818) to action.

In Dresden, a visit to the Mathematisch-Physikalischer Salon of the famed Zwinger Palace proves illuminating. EuropaStar reports that the curator of the establishment will explain how the palace eventually became a centre of astronomy and thus required ever more precise instruments, including of course timekeeping ones. In the early days, British designers of naval chronometers were favoured but luminaries such as Seyffert had something to say about that.

Seyffert was the teacher of Johann Christian Friedrich Gutkaes, the mentor of Ferdinand Adolph Lange. These legendary watchmakers brought their lessons to bear in the design and construction of the famous Fünf-Minuten-Uhr in Dresden's opera house. This imposing structure still influences design at A. Lange & Söhne (Ferdinand Adolph Lange is the A. Lange in that great name, if you hadn't already guessed). This early association with Dresden also explains why Glashütte watchmakers initially put "Dresden" on the dial of their watches, believe it or not. Of course, the fact that Ferdinand Lange was born and raised in Dresden may have influenced this decision!

Even more than Swiss towns such as La Chaux-de-Fonds, Glashütte watchmaking is marked by a very real camaraderie between the different brands



Günter Blümlein and
Walter Lange, in 1991

Ferdinand Lange was indeed the single most important figure of the nascent Glashütte watchmaking enterprise, as a visit to the German Watch Museum confirms. This rather impressive fact belies the museum's funding status, considering that the Swatch Group (owner of Glashütte Original) inaugurated it in 2006. Then again, the museum emphasises that even more than Switzerland, Glashütte watchmaking is marked by a very real camaraderie. Every Glashütte brand is recognised here, a fact the guides take pains to emphasise.

Still, it is indeed Glashütte watchmaking we are celebrating here, not Dresden watchmaking. This is basically down to chance as it had to do with Glashütte's economic state in the 19th century. Once a thriving mining centre, the villages in the Ore Mountains region of Saxony found themselves in dire straits when the veins of metal ran dry. To specifically help the Müglitz valley, a development programme was devised to incubate watchmaking as a replacement industry. Think of it as the Ministry of Manpower's Workfare Training Support, for some local context.

Eleven villages vied for the right to host what was meant to be

Saxony's watchmaking centre and Glashütte beat out its rivals in 1845; Ferdinand Lange and his apprentices were already at work here at this time, along with Moritz Grossmann, Julius Assmann, and Adolf Schneider, putting out the aforementioned "Dresden" pocket watches. (Fun historical fact: Germany did not yet exist and Saxony joined the German Empire in 1871, becoming a part of the modern state of Germany in 1918 under the Weimar Republic.)

Lange imitated the *etablissement* system of Switzerland from the outset as he had experienced it in his years in the Confederation Helvetica (Ed: this name was only adopted after 1848). In 1851, records show that Ferdinand Lange exhibited his watches at the Great Exhibition in London, which marks the international debut of Glashütte watches. It is estimated that by the 20th century, Glashütte watchmaking was made up of some 100 tiny workshops, each a virtual carbon copy of the Swiss ateliers. Suppliers and support enterprises also moved into the Müglitz valley, and thus the watchmaking cradle of Saxony was born.



By the 20th century, the watchmaking style of Glashütte had already found wide favour, leading Swiss watchmakers to produce what's known as System Glashütte pocket watches. The irony of this development was not lost on Glashütte-based watchmakers and an important point here is that the name Glashütte was already well regarded more than 100 years ago.

Of course, German watchmaking has been bedevilled by the one thing that hasn't touched the Swiss in hundreds of years: war. The Second World War (WWII) in particular was devastating, leading to the end of an era of watchmaking in Glashütte. The museum curator often talks about how the Soviets bombed Glashütte at the end of WWII, after the Allied Air Force pummelled Dresden and ultimately bathed the city in a tide of devastation.

Adding insult to injury, the Red Army essentially looted the watchmaking manufactures and sent all the equipment back to the USSR. Well, to the victors go the spoils, perhaps, but one thing no one could pillage and ship off is spirit. It is with visible pride that the museum guide explains that Glashütte remained unbowed, unbent, and unbroken. Of course, the establishment of the GDR meant that Saxony was now on the wrong side of the Iron Curtain and traditions would have to be re-engineered. In the planned economy, all the Glashütte watchmaking firms were forced to merge into a single conglomerate called Glashütter Uhrenbetrieb (GUB). The goal was mass production for greatest possible economies of scale; the proletariat needed to keep good time after all. Nevertheless, exports to West Germany resumed in the 1960s so the idea of Glashütte watchmaking wasn't extinguished.

The end of the Cold War and the fall of the Berlin Wall presented yet another existential threat to watchmaking in Glashütte, given that economic realities were rapidly shifting. Shortly after the momentous events of 1989 and 1990, there were perhaps fewer than 70 people left working in the watchmaking trade in Glashütte. This is when the contemporary era of Glashütte watchmaking began, with Walter Lange and Günter Blümlein seeing an opportunity and moving on it. The full force of the Swatch Group followed, and by 1994, some of the old names and characters were back in business, including A. Lange & Söhne, Glashütte Original, Mühle-Glashütte and Nomos Glashütte.




Glashütte in 1855,
10 years after it was
selected to be Saxony's
centre of watchmaking



The reality today is vibrant, with A. Lange & Söhne and Glashütte Original creating a level of visibility for all Glashütte that is unheard of. There are hundreds working in watchmaking here, which is significantly better than GUB's situation after the Reunification. Nevertheless, GUB employed some 2,000 people, so the industry here has some ways to go yet. If the hunger for Glashütte watches manages to sustain itself, the future looks bright.

"I believe that the fact that all the brands here bear the name of Glashütte on the dial is already a considerable feat as far as promoting the region is concerned, and it also means that we're proud to be here,"

says A. Lange & Söhne CEO Wilhelm Schmid, commenting on a story about Glashütte watchmaking published by EuropaStar.

On that note, an explanation about this practice is useful. There are apparently some 33 towns or villages in Germany with the name Glashütte, so the watchmakers undertake to identify the specific Glashütte of Saxony of their origin. This is why there is a 1/SA or just /SA on the dial, joining whatever the brand names are present. This confirms for owners the specific Glashütte of their watch, although we are only aware of one Glashütte that hosts such an extraordinary watchmaking history... 



In this view of the town, one can see both the Nomos Glashütte building in the foreground and Moritz Grossmann in the background.



Zeitwerk

A. LANGE & SÖHNE

The name that started it all in 1845 was famously responsible for the revival in the 1990s.

Walter Lange, a descendant of FA Lange, rolled into town with the precursor of Richemont and promptly re-established A. Lange & Söhne. Walter Lange, like his famous ancestor, became the face of the revival, even as the Hayeks swept in and bought up the assets that we know today as Glashütte Original. The importance of this face value, no pun intended, can be seen in Walter's accounts of the bombing of A. Lange & Söhne's premises in 1945, on the last day of WWII. The power of his personal story, and Richemont's marketing apparatus, drew the attention of contemporary watch collectors.

Arguably, it was the resuscitated A. Lange & Söhne that showed a new way forward for German watchmaking as a whole. With its double-assembly process, A. Lange & Söhne easily made the case for fine finishing at the level of haute horlogerie. This is the reason that the contemporary era of Glashütte watchmaking reaches quite comfortably into the realm of high complications, once the exclusive preserve of the Swiss. Today, industry observers can easily point to lessons the Swiss could learn from Glashütte. Obviously, A. Lange & Söhne knows how to reach out and work with collectors, and how to build scarcity into its DNA – the brand has been saying for more than 10 years now that it makes 5,000 watches a year. For more on this and other facts relating to this brand, please see our cover story.

GLASHÜTTE ORIGINAL

A quirk of history with Glashütte Original makes this the only current Glashütte watchmaker to have just about 170 years of experience here. It is perhaps no accident that this Swatch Group-owned firm does not have a proper name like its peers and rivals in town and is named after a convention Glashütte watchmaking used to differentiate itself from imitators... While it is certainly a fact that there were no Glashütte Original pocket watches in the 19th century, it is also a fact that the Karl W. Höhnelt watch factory produced pendulum clocks with the imprint Original Glashütte on the dial possibly as early as 1916. This firm, along with Deutsche Präzisions-Uhrenfabrik Glashütte as well as Uhrenfabrik A G Glashütte, all used Original Glashütte on their dials; one can view these examples at the aforementioned museum.

The firm we know as Glashütte Original was born from the GUB, as it transitioned from being a state-run business, into various different aspects. Glashütte Original sees itself as the heir to a tradition of watchmaking that has survived the rise and fall of empires, two world wars, the Third Reich, communism, and Reunification. There is something to this of course, given that we have already seen how all of Glashütte's watchmakers were merged into the GUB. Whatever one makes of it, the GUB preserved the history of watchmaking in the region.

Highly vertically integrated, Glashütte Original today produces upwards of 10,000 watches a year. We have personally seen the old GUB-era machines in use to produce parts, making this the last relic of the previous era of Glashütte watchmaking. Speaking of the GUB, Union Glashütte has its own offices but has been overshadowed by Glashütte Original.



Senator
Chronograph



Atum models

MORITZ GROSSMANN

As previously noted, Moritz Grossmann was a peer of Ferdinand Lange and is known today for his academic contributions, including a major treatise on watchmaking that is on display at the Museum in Glashütte. The current company occupies an impressive building opposite Glashütte Original (they are separated by the train tracks and the Nomos Glashütte manufacture) but the current firm has nothing to do with the Grossmann family.

Established by Christine Hutter in her kitchen in 2008, it takes up the historical Grossmann's quest to create simple but perfect mechanical watches. Hutter herself is a watchmaker who worked at A. Lange & Söhne and Wempe before venturing out on her own. Clearly, the lessons she learned at contemporary A. Lange & Söhne left her with an understanding of the power of scarcity and fine finishing. The brand, like other names in Glashütte, is quite vertically integrated and even makes its own hands. It currently produces hardly more than 500 watches annually and, accordingly, starts out above €10,000. There are currently only three collections from Moritz Grossmann: Benu, Atum, and Tefnut, all named after ancient Egyptian deities.

MÜHLE-GLASHÜTTE

Not every Glashütte watchmaking firm merged into the GUB overnight. In the case of Mühle-Glashütte, the change happened in 1972, but prior to that, all the way back to 1869, the company specialised in nautical measuring instruments. Given Glashütte's geographical reality, this is highly improbable but one can apparently still find Mühle-Glashütte quartz clocks on merchant vessels today. Although wristwatches are its stock-and-trade these days, the company keeps its traditions top-of-mind by maintaining the words "nautische instrumente" on the dials.

Unique amongst the Glashütte set of watchmakers, Mühle-Glashütte is still headed by the Mühle family, with fifth-generation scion Thilo Mühle as CEO. The family has deep roots in the region, long before Robert Mühle started working at Moritz Grossmann's company. Mühle-Glashütte's continuity here means that the Mühle family remained in Glashütte during the GDR days and were involved in the GUB company. Traditional to a fault, the company sticks with affordable excellence as its mainstay. The contemporary Mühle-Glashütte produces some 8,000 watches a year, ranging from €1,500 to €3,500.



Teutonia Sport

NOMOS GLASHÜTTE

Founded in 1990, shortly after the Berlin Wall came down and the world woke to the sputtering end of the Cold War, Nomos Glashütte brings a distinctively contemporary touch to the Müglitz town and to Glashütte watchmaking in particular. Design is a big deal here, with the brand picking up many prizes, including the Red Dot Award.

In a village full of quaint structures, mostly rebuilt after WWII, Nomos Glashütte is resolutely contemporary. If you get a chance to tour it, this is one of the few manufactures that reflect the look and feel of the watches produced within. Crucially, it is a proper manufacture, with its own calibres that are assembled right here – design of the watches on the other hand is handled in Berlin. The name Nomos means rule or law in Ancient Greek and was a known entity in the early 20th century. It was resurrected in its current form by Roland Schwertner in 1990. In our BaselWorld presentation this year, all the novelties this year have a typically contemporary Teutonic feel, if there is such a thing. There are 10 collections, including the square Tetra and the automatic Neomatik. Nomos Glashütte watches begin at €1,000 and finish above €10,000. It produces 20,000 watches a year by some estimates.

Neomatik



Saxon One
Chronograph

TUTIMA

This one is a survivor, although the old company that produced Tutima branded watches is long gone, with even its premises demolished after Reunification. The Tutima tradition went to Ganderkesee in the north of West Germany after WWII, following Ernst Kurtz. An employee of his, Dieter Delecate, continued the story by reviving Tutima in 1960. Delecate subsequently looked into bringing Tutima back to Glashütte but, according to an interview in WatchTime, was a bit apprehensive when he saw the big groups swooping in.

Nevertheless, Tutima found its way back to Glashütte and is now in brand new premises, near the train station. The brand made its name in the Cold War with so-called flieger watches for the West German air force but in its Glashütte heyday, it was a maker of high-end pocket watches. Delecate wanted to revive this “original” vision of Tutima, which goes a long way to explaining his worrying about A. Lange & Söhne previously.

In 2011, in a coup for the new era of Tutima in Glashütte, the brand launched a minute repeater wristwatch called Hommage, the first high complication of its kind to be made in-house at Glashütte. Limited to 30 pieces, this is the highest expression of Tutima watchmaking, and representative of the newer “Made in Glashütte” collections; Tutima retains its facilities in Ganderkesee and has a network of third-party suppliers across the globe. Its watches start at roughly €2,000 and taper out at €5,000, for the most part. The Made in Glashütte collections include the Grand Flieger, the M2, the Patria, and Saxon One.

TOKEN OF APPRECIATION

A gift is different from a gratuity and should be treated as such with timepieces

that will stand the test of time WORDS **JASON KWONG** PHOTOGRAPHY **LONG FEI** STYLING **EVON CHNG**



1. Seiko Astron GPS Solar

Seiko's Astron has grown up and graduated into dress-watch territory. It is still not an easy watch to use given the barrage of functions – chronograph, dual-time, world-time, and now, big-date. But this solar-powered watch does so with stainless steel and titanium outfits that are like a sharp suit and a knowing wink that being tech savvy doesn't mean being socially awkward; mirror-finished surfaces will do that for you. The titanium versions boast Roman numerals for indexes like a pocket square of sophistication. And who can argue with the inclusion of a ceramic bezel and sapphire crystal? A push of a button allows the time to be synched and adjusted anywhere in the world.

2. Casio G-Shock GPW2000-1A

Defying gravity as its name suggests, the new Casio GPW-2000 Gravitymaster is a masculine proposition that will tickle the fancy of pilots and devotees of all things aviation in a 57.2mm case. This is because it has a Flight Log function that records location and time data. The recently developed Connected 3-Way module ensures accurate time-telling anywhere on the planet. Adding deft functionality, it does so with Casio's proprietary GPS Hybrid Wave Ceptor that calibrates the time via both GPS and radio signals. Cleverly, the addition of Bluetooth connectivity with your smartphone provides another counterbalance for updating internal data on time zones. Ok, it does require a bit of fiddling to get things going. You will likely to see modern commercial pilots proudly sporting this when practicality wins an argument.

3. Louis Vuitton Tambour Horizon

Move over Supreme. Is this the next fashion evolution that will get hypebeasts and smartwatch neophytes excited? The Tambour Horizon has a 42mm case that is available in colourways such as graphite, monogram, and black. Wearers can also choose between 30 detachable straps for men. Working closely with Google and Qualcomm Technologies, it combines all the requisite technical capacity with an instantly recognisable Tambour Moon mien replete with the added advantage of switching between digital versions of GMT, chronograph, and Escale Time Zone dial faces. As a trend, perhaps early adopters have tired of too many features in too small a package. This is addressed by Louis Vuitton with intuitive functions such as My Flight that keeps frequent travellers informed of their flight times and other useful information.

TECH OBSESSED

Clearly in denial despite the symptoms – moss-lined rubber strap, mud-caked case back and a gingivitis infested electronics display that was illegible – it's time to for futurists to ditch that digital quartz number and find solace in these latest intelligent offerings

TAG Heuer Connected Modular 45

Akin to how old-school forex traders view Bitcoin and other paperless cryptocurrencies, there is a hint of scepticism when the Swiss cohort brandishes expensive smartwatches in an already murky waddling pool. Like a diss track, Jean-Claude Biver let rip (to the haters) that the Connected “embodies the luxury codes of tomorrow”. Measuring 45mm in diameter, the design is that of a modular smartphone whisperer whose lugs, strap, buckle, and case – titanium, ceramic or rose gold – are interchangeable components. Engineered in collaboration with Intel and water resistant to 50m, it features GPS, an NFC sensor, a high-definition AMOLED screen, and a wide selection of customisable TAG Heuer Carrera dial faces. It is covertly pimped by British agents in *Kingsman: The Golden Circle* and is thus also suitable for individuals who often pair their outlook on gadgetry with classy yet understated bespoke suits.



GYM RAT

Hard core with a penchant for outdoor activities. They value timepieces that can withstand deadlifts and judgmental dress watch owners



HARDIOR

Breitling Superocean Héritage II

Breitling has redesigned the Superocean Héritage that's celebrating its 60th anniversary this year. The affiliation continues with this year's chronograph model that's housed in a 46mm stainless steel case. Powered by the COSC-certified Calibre 13 that has a scratch-and-shock-resistant high-tech ceramic ring. The elimination of the metal ring surrounding the minute circle means that the bezel appears to form a seamless whole. Our pick, in this instance, is the blue dial variant with a retro steel mesh bracelet that amps the cool quotient during push-up sessions on the deck of a yacht.



1. Apple Watch Series 3

Clean, functional, and relatively free from superfluous trappings of third-party apps, the Apple Watch Series 3 is working up a sweat by multitasking to the tilt. It may be frustrating to those who own the previous incarnation but it is hard to beat a faster processor and the freedom of cellular that doesn't require being tethered to your iPhone. A vivid display ensures that tracking your workout is a cinch. There's also a version with Nike+ embedded and the customisable strap makes it easy to switch out from a rubber one to a fabric or metal bracelet when the need arises. Try wearing your regular mechanical ticker after three weeks and you'll have that constant uneasiness that there's an important notification that you're flippantly unaware of because Siri is no longer at your beck and call. Of course, you could just wear two watches...

2. Rado Ceramica Automatic

High-tech ceramic is, of course, also hypoallergenic and adapts readily to the wearer's body temperature, making it comfortable against the skin, and that's what makes it a surprisingly perfect companion for any sporting endeavour. Those fond of the original Rado Ceramica will appreciate its updated design by industrial designer Konstantin Grcic last year. This is also the first time an automatic movement has been incorporated and suggests deriving efficacy from tiny tweaks for a watch that is resolutely tough. And that's how we can view the philosophy of the original Ceramica's intended design, which has been under-appreciated by many. There was a structurally sound foundation that didn't require tank-like construction.

3. Luminox Tough Viking Special Edition

Tough Viking is the largest obstacle race in Scandinavia, conceptualised with input from Kustjägarna, the Swedish elite maritime unit. As such, Luminox's Tough Viking 3500 will likely further embolden chest-thumping contestants of such masochistic recreational activities. Appearance-wise, the 45mm watch will rouse tough nuts inclined towards military aesthetics. It comes in a black carbon compound case with an olive-green dial. Housing a Ronda 515 quartz movement and water resistant to 200m, it comes with an additional green webbing strap for interchangeability, as well as a strap changing tool.

RISK TAKERS

There are no hard-and-fast rules for this non-conforming category. Hard-earned arrogance requires more than just unbridled gumption as can be attested by rogue timepieces that have gone off the reservation



Tudor Heritage Black Bay S&G

There is a date window! And they signed both David Beckham and Lady Gaga as brand ambassadors in one fell swoop. Golden Balls was proudly wearing one during his introduction campaign to the brand. Those who bemoaned the return of two-toned watches cowered in fear at the shock tactics applied by a normally diffident Tudor. The Heritage Black Bay Steel and Gold has a 41mm stainless steel case. Of course, there is a generous application of gold on the bezel, crown, and bracelet links. A nice subtle detail is the black lacquered Tudor rose on the crown. The COSC-certified Calibre MT5612 is used this time to make way for a date complication. The watch is water resistant to 200m and the slightly domed sapphire crystal is a vintage throwback that should eventually appease collectors. All in, it is a lot of bang for your dollar before the very likely Beckham GST kicks in.



1. Franck Muller Vanguard Fullback

The visually-rich dial of a Franck Muller timepiece logically does not sit well with any attempt to create an aviation-inspired watch. The notion of legibility at Franck Muller is decidedly playful making this dicey move somewhat like an intercontinental ballistic missile meant to incite a horological reaction. Housed in what seems to be a modified Cintree Curvex case made of titanium, rose gold, and carbon, fans will continue to be thrilled by all the compelling additions of a target display, diminished minute counter, and a gliding date aperture. These are specifications that are jointly meant to reference flight instruments of the supersonic era. There is also a red trigger that protects the crown and reminds us of a greatest hits compilation of *Airwolf* moments.

2. Raymond Weil Freelancer David Bowie

Some think it is frippery. Others consider it quixotic. *Aladdin Sane* was a seminal classic. This was also the album featuring a lightning bolt painted across David Bowie's face. Its subsequent Andy Warhol-designed iteration is seen here juxtaposed against the black circular satin-brushed dial. Meant to resemble a vinyl record, it is as trippy as it gets with thin, barrel-shaped hands as emaciated as the man himself in the 1970s. With the 42.5mm steel case that features a portrait of Bowie and a limited edition engraving on the caseback, you'll look like a certified rock n' roller with the matching black calf leather strap. The self-winding RW4200 movement (38 hours of power reserve) marks this tribute Freelancer, limited to just 3,000 numbered pieces.

3. Corum Big Bubble Anima Matteo Ceccarini

This collaboration with Italian DJ Matteo Ceccarini employs a fresh pair of eye(s) to cockamamie effect on the Big Bubble. Piling on the absurdist quotient to the collection, its multi-dimensional dial is rendered lifelike by the domed sapphire crystal. But who is going to complain when an ocean blue iris looks like its dilating during a staring contest. Clad in a round 52mm titanium case and paired with a vulcanised rubber strap, the movement within is a CO 390 automatic calibre with 65 hours of power reserve in the tank. On the off chance that you need to tell the time, look at those circular dots on the outer rim. Go figure. Limited to 88 pieces each.

JET-SETTER

For someone who is at the top of his game: in-control, self-sufficient, and unassailable. They are for individuals who prowled the world's playgrounds restlessly



Longines Avigation BigEye

The medical condition when you have one eye bigger than the other is called “amblyopia” and it often leads to vision impairment. In this case, the intentional asymmetry delivers positive results; the chronograph 30-minute sub-dial is significantly larger for enhanced legibility to allow the minute counter readings to be seen at a glance. After making an impression in the 1970s, Longines takes on a remake for a model that hails from the Heritage collection and oozes top-grade pedigree: from its domed sapphire crystal and sand-blasted hands to its self-winding three-counter chronograph L688.2 movement. The chronograph uses a column wheel instead (a signature of ETA-built movements for Longines) and is based on the Valjoux 7750. The watch is already a 2017 Grand Prix d’Horlogerie de Genève (GPHG) finalist in the chronograph category.



1. Cartier Drive de Cartier Moon Phases

The Drive de Cartier Moon Phases is a projection of a trustworthy and stable individual. They tend to prefer solid colours but not checks, stripes, and floral prints. The reinforced notion for such corporate high flyers is a no-nonsense approach towards their timepieces. The look of a watch should not be cluttered and Roman indexes are easily read, allowing straightforward timekeeping with the automatic 1904-LU MC movement. Date windows and a seconds hand, like WhatsApp groups with co-workers, are not contractual obligations. But a complication that accounts for the cycles of the moon hints at loftier goals in life.

2. Jaquet Droz Petite Heure Minute Lion

Fascinated collectors who have long scratched their heads over how the artisanal flourishes of Jaquet Droz often hide mechanical treasures beneath should look no further. A regal Art Deco masterpiece, it displays a miniature painting of a lion below the off-centred hour minute hands. A grand feu enamel dial places a roof over the guts of the vaunted self-winding movement that packs a punch with two barrels, silicon balance spring, and a red gold oscillating weight. While birds of a feather tend to flock together and aficionados will spend hours examining the Relief Seasons models, this subtle 43mm red gold watch is the Petite Heure at its most masculine.

3. Junghans Meister Pilot

The Junghans Meister Pilot is not for sentimental types. Resolutely utilitarian, this 43.3mm bad boy with a stainless steel case comes with, quite possibly, the most simplified layout of a bi-compax chronograph in our day and age. Fusing top-notch performance with a pared-down design, you can ascertain the time with ease because of white glowing luminous hands and indexes. Running on the J880.4 self-winding movement (38 hours of power reserve), it comes with a bi-directional rotating bezel highlighting 12 concave notches.

ECCENTRIC

Often a glorious mess, there is a knowing gratification that inner passion lies in being able to acquire timepieces that please the very particular wearer and (almost) no one else

Montblanc 1858 Automatic Dual Time

Nonconforming horology pundits will hardly consider this a takedown model of the Chronograph Tachymeter Limited Edition. Of course, the bronze alloy has been switched out for a 44mm stainless steel case and matte bronze bezels for a bi-colour vintage tribute. Just don't call it a GMT by default because a second time zone with day/night indicator is made possible with an in-house MB29.19 calibre. You may conceal the additional cathedral hour hand beneath the first if you're in your home country. And instead of a champagne-coloured dial, you have a black backdrop that's more legible. A domed sapphire crystal adds to the vintage appeal for globetrotters who will have less grouse hitching up their sleeves to check the time at their new destination.






1. Bell & Ross Vintage BR V2-94 BellyTanker

The Belly Tanker racer succeeds the B-Rocket motorcycle and the Aero -GT concept supercar as an impressive display of bravura by Bell & Ross. During the 1950s, the Belly Tanker is widely remembered for participating in speed trials on the Bonneville Salt Flats in Utah. All geared up to set your pulse galloping is the new BR V2-94 equipped with a retro-inspired tachymeter scale on the bezel. Under the hood of this automatic chronograph resides the Calibre BR-CAL.301 beneath the “panda” dial. The metallic copper of the dial is reminiscent of the wheel rims of these vintage racers. We’re also drawn to satin-finished steel of its round 41 mm case that alludes to fuel tanks belonging to P-51 Mustangs.

2. Bulgari Octo Ultranero

Great for venture capitalists with chump change to spare, the Midas touch of Gérald Genta on the Octo has clearly trickled down to the Ultranero. Angular with jagged edges, the watch is a layer cake of goodies that highlights a round bezel nestling on a reasonably sized 41mm DLC-coated stainless steel octagonal case. While our preference is for all-black in this instance, there is the option to acquire versions that have hits of blue or red. Water resistant to 100m and featuring a date aperture at three o’clock, the in-house movement with Côtes de Genève and perlage decoration is also extensively chamfered and can be viewed through the exhibition case back.

3. Chopard L.U.C XPS 1860 Officer

Chopard’s new L.U.C XPS Officer is truly one handsome watch. Reinvigorating simplicity with composed execution, this ultra-thin good-looker has a stunning honeycomb pattern on the dial and hunter-style case back. Even more amazing when examined at close quarters, you’ll see the intricate lines that harken back to a time when beehives were a common sight in Fleurier, Switzerland. Housing the Poinçon de Genève endorsed automatic Calibre 96.01-L, it features a gold micro-rotor for the transfer of energy to its dual main spring barrels that are responsible for the L.U.C range’s signature 65 hours of power reserve. Available in a limited edition run of 100 pieces. 



Zeitwerk Decimal Strike
Strike in honey gold



GAME ON

Collectors consistently wax lyrical about A. Lange & Söhne, prompting us to (re) discover how this Glashütte brand stays many moves ahead of the competition

WORDS **ASHOK SOMAN** PHOTOGRAPHY **GPS**

Keeping good time is frightfully difficult and, for most of human history, simply impossible to achieve with any degree of precision. Today, of course, this fact is obscured by GPS-enabled precision time, coupled with the near-ubiquitous smartphone. If we probe honestly and deeply enough, we'll recognise that we know very little about how GPS or our smartphones function (apologies to physicists, engineers, and other specialists). In this, most of us resemble Jon Snow in that we know nothing and are struggling possibly in vain against the mighty forces of inexorable death and advancing time.

Space-time may be a formidable challenge, but fortunately for us, we have powerful champions in the merchants and artisans of time who make sense of it. After all, what else is a watchmaker but a skilled interpreter of events in the fourth dimension? Literally, the beauty of a fine mechanical timepiece is a visual representation of the passage of time (this is not to say a digital ticker cannot have its own beauty, but that's a story for another day).

Space-time is very much on our minds, as you will find elsewhere in this issue, and so is German watchmaking, obviously. This year, A. Lange & Söhne delivered to the world a most impressive Lange 1 watch that also sports a highly distinctive moon phase display and a day/night indicator. This places so many questions about celestial bodies front and centre that we just had to marvel at it again, and yes, put it on our cover.

OUT OF SIGHT

There's a spectacular fact about this watch that we have to address for a moment, especially because there was a widely publicised solar eclipse this year visible mainly over the continental USA. Being that we are so close to the equator here, we rarely get a shot at a nice solar eclipse, but our last one was just last year. In any case, just because we are at the wrong angle to see the action, it does not mean it did not happen. In the same line of thinking, just because you do not see the sun and the moon share the sky at the same time, it doesn't mean that they don't. The English language tricks us into certain tropes, what with the rising and setting of the sun juxtaposed against the rising and setting of the moon. This is certainly egregious but even worse is the idea that stars only come out at night!

To its credit, A. Lange & Söhne is using these quirks of language and thinking to generate interest in a watch that honours the proper place of the moon in the sky. In any old watch with a moon phase indicator, as long as it is not the new moon, you always see the moon on your wrist. The Lange 1 Moon Phase (the Glashütte manufacture is sprightly in its naming conventions) adds to this by combining the moon phase with a day/night indicator. This allows the moon to coexist with the appropriate background at all times. We already covered this deliciously accurate moon phase last year, but if you want to know how it is only off by one day in 122.6 years, please see our sidebar in the following pages.

WE ARE ALL MADE OF STARS


Technicalities of that moon phase aside, it is that day/night indicator that has people talking, and the black dial that the white gold version sports; this 38.5mm watch is available in red gold, white gold, and platinum, each with a specific dial colour (black/white gold; silver/pink gold; rhodium/platinum). Driven directly off the hour wheel, the day/night indicator is in constant motion as long as the hour hand moves, much like the moon phase indicator. On the solid gold day/night disc, different times of day are represented by varying blue hues caused by interference effects. During the day, it shows a bright sky without stars, while at night, it depicts a dark sky with prominently contrasting laser-cut stars. Yes, laser-cut.

Given that A. Lange & Söhne is referencing the many mysteries of the moon that science has not yet resolved (on its website and press release), this contemporary touch is entirely appropriate. Purists should note the Saxonia last year also featured laser-cut stars and this has been the norm since 2014, and take a look at our segment on the fine hand-finishing A. Lange & Söhne typically uses.

Speaking of which, the manual-winding calibre L121.3 is based on the calibre L121.1 that powers the most recent version of the Lange 1. The moon phase and day/night indications are built up on this base, basically in an entirely fresh fashion. Although the Saxonia Moon



Lange 1 Moon Phase
in white gold



The fusée-and-chain system seen here is a signature of all A. Lange & Söhne watches with the "Pour le Mérite" appellation

*Just because you do not see the sun and the moon share the sky
at the same time, it doesn't mean that they don't*

Phase and the Lange 1 Moon Phase are similar, one look at the movement and we can see that there are significant differences, right down to components, not just movement architecture.

This is certain to please collectors, especially those who recall that A. Lange & Söhne did the same thing when they revamped the Lange 1, bringing the new L121.1 into play even though the watchmakers could have stayed with the same basic architecture.

STRIKE 10

While the Lange 1 makes a compelling argument for the striking good looks of the entire collection this year, the most striking watch literally has to be Zeitwerk Decimal Strike. Usually, A. Lange & Söhne goes with simple names for its watches, just like astronomers do for cosmological phenomenon, but with this new Zeitwerk, the brand has its work cut out for it. For example, it must be spelt out that this is a watch that sounds out time; a striking watch in watchmaking jargon. After that, it must also be explained that the decimal of the name refers to the pattern it uses to sound out time.

Broadly speaking, the watch marks the passing of time in 10-minute blocks instead of quarters, like its predecessor – the Zeitwerk Minute Repeater. It would be easy enough to simply modify the movement to make things simpler. One would think this,

and indeed, the development team had this thought too but being that this is mechanical watchmaking, some complications arose. "To be honest, we thought it would be an easy transition, but ended up needing a new movement along the way, because a passing strike every 10 minutes is six strikes an hour..." says Anthony de Haas, A. Lange & Söhne's director of product development.

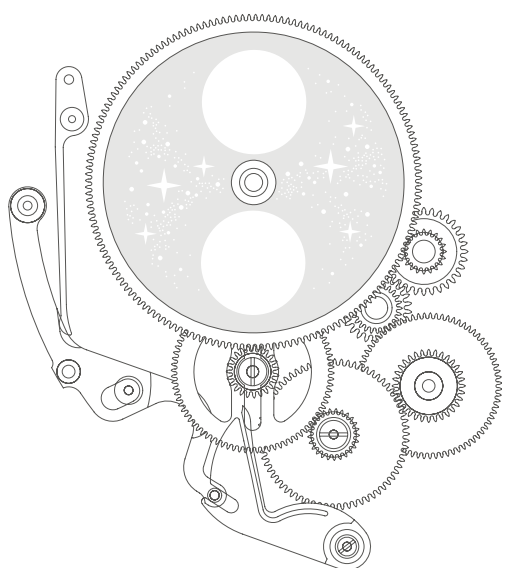
It is useful to remember here that the Zeitwerk Minute Repeater was also a digital striker. In other words, it sounded out hours, 10-minute intervals, and minutes while regular minute repeaters sound out hours, quarter-hour intervals, and minutes. The new Decimal Strike is simpler in that it sounds out a high-pitch tone at the top of each 10-minute interval, one low-pitch tone per hour. Hence we arrive at those six strikes an hour that de Haas mentions. The Decimal Strike does this en passant, not on demand as they say; the Zeitwerk Minute Repeater sounds out time on demand. One can silence the Decimal Strike but without user intervention, it will keep sounding out the passing of every hour and every 10-minute interval.

GAME OF TONES

Now, the Zeitwerk Decimal Strike is a proper successor to the Zeitwerk Striking Time model, not the minute repeater. Like its predecessor, the Decimal Strike is in the odd position of not being a



Lange 1 Moon Phase
in pink gold



MOONSHOT

The new Lange 1 Moon Phase achieves incredible accuracy but we must point out that it is not even the most obsessively accurate moon phase stalker in the A. Lange & Söhne arsenal. That would be the awesomely named Richard Lange Perpetual Calendar Terraluna, or Terraluna for short. That watch featured a then-unheard-of accuracy of 1,058 years...

The moon disk of the Lange 1 Moon Phase consists of twin gold disks turning on an axis that is driven off the hour hand. A seven-step transmission helps the system here to calculate the synodic period to 29.531 days. Another way to express this is to break it down to 29 ½ days, 12

hours, 44 minutes, and 2.9 seconds. If the watch were to run continuously, the moon phase display would be off by from the actual phase of the moon by a single day after 122.6 years.

The typical moon phase display is driven off a gear wheel with 59 teeth that advances by one tooth per day. This system obviously uses 29.5 days as a base, which means the display will be off by one day after two and a half years. Systems that go up to 122.5 years of accuracy use a gear wheel with finer teeth, totalling 135 instead of 59. A. Lange & Söhne's transmission system represents yet another sort of approach.



Like its predecessor, the Decimal Strike is in the odd position of not being a proper complication, occupying a niche with just the Striking Time for company

proper complication, occupying a niche with just the Striking Time for company. Indeed, the tremblage finishing on the time bridge on the dial, mirrored in the hammers of the striking mechanism is normally associated with Handwerkskunst models, which the Decimal Strike is decidedly not (as noted by our friend and sometime contributor SJX as well as Hodinkee).

Producing something this esoteric and eclectic takes guts and purpose, lest the watchmakers be accused of being rudderless. Purpose-built movement (calibre L043.7) aside, de Haas tells us there was a specific plan all along. "The Zeitwerk Decimal Strike is the first striking watch in honey gold, and developed with this in mind right from the start. We wanted to know how honey gold would sound, but we also wanted something a little more different. This was why we chose to make it mark the passing time in 10-minute blocks, instead of quarters."

The Zeitwerk Decimal Strike is limited to 100 pieces in

A. Lange & Söhne's special gold alloy and has great wrist presence at 44.2mm. The power reserve is a bit of an issue here, as it is in all Zeitwerk models because all that chiming action is powered by the same mainspring that powers the display of time. In fact, Lange says that the jumping display of time in the Zeitwerk was perfect for the striking mechanism. The build-up of energy from the mainspring that is used to advance the jumping numerals, which move instantaneously, is used to power the striking action. Basically, some of the energy that might be otherwise wasted goes to powering the springs that load the hammers. Overall, calibre L043.7 has a power reserve of 36 hours. If one does not silence the watch, it will literally tell you when it needs to be wound up...

POUR LE MÉRITE

The final watch in our selection here is the 2017 Tourbograph Perpetual "Pour le Mérite", which is the fifth watch since A. Lange



Calibre L133.1 is the first in the world with a curved tourbillon bridge finished with mirror polishing



& Söhne burst back upon the scene since 1994 to have earned this appellation. We did shoot the 1815, but you'll have to look to our Highlights section for more on that.

As mentioned earlier, the majority of the A. Lange & Söhne range of watches have the simplest possible names and here's the proof. No one gets any prizes for guessing what complications this watch sports, but you can pat yourself on the back if you know what mechanical system all five "Pour le Mérite" watches have in common. Not to worry if you can't guess because we will get to it.

When the Tourbograph Perpetual "Pour le Mérite" debuted at the Salon International de la Haute Horlogerie (SIHH), it almost seemed like we had seen this watch before – then everyone noticed the tourbillon bridge and it was obvious that this was indeed brand new. OK, for the uninitiated, the watchmakers have managed to squeeze a tourbillon, a double-split chronograph, moon phase, and a perpetual calendar into this 16.6mm-thick behemoth. The diameter of the watch, at 43mm, is by contrast relatively tame; the Zeitwerk Decimal Strike at 44.2mm is bigger.

The WOW team was duly impressed by the Tourbograph Perpetual "Pour le Mérite" when we first saw it at SIHH. Briefly, this is a superwatch with tourbillon, chronograph, and perpetual calendar all coexisting in blissful harmony. As the good folks at A. Lange & Söhne put it though, one could say there are a couple more complications here, what with that "Pour le Mérite" distinction. Basically, this Prussian standard of excellence is applied by A. Lange & Söhne to watches with the extraordinary fusée-and-chain transmission system.

This story will get to that vaunted transmission system in a moment but first, we have to state that we admire the watchmakers at A. Lange & Söhne for their dedication to making the best watch they possibly could, right down to creating an integrated movement such as the manual-winding Calibre L133.1 here rather than merely adding modules to an existing base. Throwing a curved tourbillon bridge into the mix and subjecting it to the same mirror-polishing regime is amazing (see our note on black polishing below), even if the reasons for that curve were dictated by necessity.

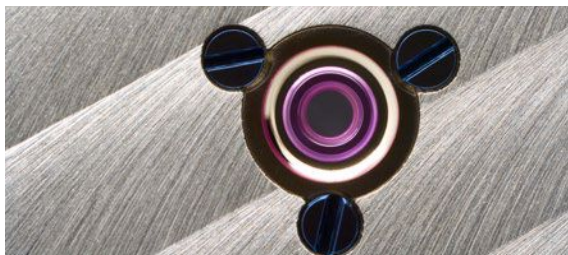
This is a 684-part monster of a movement, with 206 parts dedicated to the perpetual calendar, and that new ultra-accurate moon phase indicator adding extra complexity (see Moonshot sidebar). It is actually the presence of the perpetual calendar and



Tourbograph Perpetual
"Pour le Mérite"

FINISHING TOUCHES

Glashütte has its own signature moves as far as fine finishing goes. Just like the valley's watchmakers were forced into vertical integration, they also developed their own sorts of ideas about finishing, some of which are original, while others are just applications of what you will already recognise from the major Swiss players. At A. Lange & Söhne, the watchmakers are justly proud of their skills and special touches. We tried out a few of their moves and fell so far short of the mark over the years that it was laughable. Below is a (relatively) comprehensive list of what A. Lange & Söhne fine hand-finishing is about.



ENGRAVING

A signature finishing touch at Lange is the engraving of balance cocks, something that is done entirely by hand, of course; occasionally, there is also an intermediate wheel cock, which also receives the same treatment. Also traditional for Lange are the motifs used, consisting of flower petals and floral patterns.

moon phase sections, being closer to the dial, that called for the tourbillon to be recessed. The additional sections basically added height to the movement, and recessing the tourbillon forced the bridge into the aforementioned curved shape.

Whatever your perspective on watchmaking complications, and if you truly consider the fusée-and-chain transmission system as such, the Tourbograph Perpetual "Pour le Mérite" is one of the most complicated pieces at the fair this year, if not the most complicated traditional timepiece. For this reason – though it is not the only reason – we decided to revisit it here. **W**

RIBBING

Resembling Geneva striping, the uniform stripes of the ribbing pattern decorates each three-quarter plate and the case back sides of the bridges of a Lange calibre. They are produced by a slightly inclined, rotating grinding wheel that is guided along the component in straight, parallel lines.

FLAT POLISHING

This is the real deal right here and if you try it, it will break you. Only real finisseurs can handle the pressure of up to two hours of work to achieve a mirror polish finish on a whiplash spring (so says the Lange website). Many members of this editorial team have tried this and it has devastated all of us. Apply too much pressure, or if even a bit of dust gets between you and the part you are polishing, and hours of work can be left in ruins. The part has to be worked with, we kid you not, the pith of an elderberry shoot in a figure-of-eight pattern over films coated with progressively finer diamond powder.

INTERNAL ANGLE POLISHING

When watchmakers want to highlight that their movements are hand-finished, they usually go with this. If internal angles are rounded, machines may have been involved. If these are sharp and straight, only the human hand could have done it. At Lange, finisseurs do it all by hand, using a pencil-like metal tool to create and polish the internal angles of bridges and levers.

CIRCUMFENTIAL POLISHING

Even the edges of the movement receive great care at Lange, as the word circumfential implies. The edges of the movement are manually pressed against a rotating abrasive peg. This treatment is roughly analogous to icing on the edges of a cake, except it is not visible.



BLACK POLISHING

This is a legendary technique and, at Lange, it is reserved for a few parts, such as tourbillon bridges. While flat polishing takes hours, this takes days... This finished part ends up with a mirror polish that looks black at certain angles.



CIRCULAR GRAINING

Here's that counterpoint to straight graining... Smaller wheels and the like receive this finish, which is achieved by simply rotating the part in question on abrasive paper. Sounds simple but, like everything else on this list, you need an abundance of patience and very steady hands.



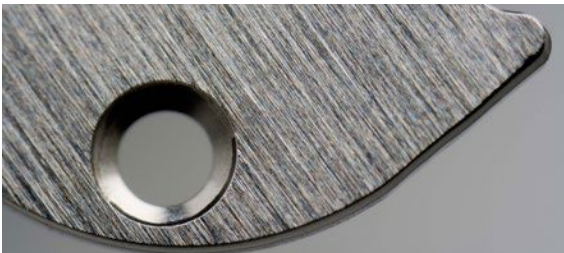
SOLARISATION

The spiral arms of solarisation constitute a decorative finish applied principally to mainspring barrels and other large round surfaces or wheels. The pattern is produced by rotating the part in question and the grinding wheel in opposite directions.



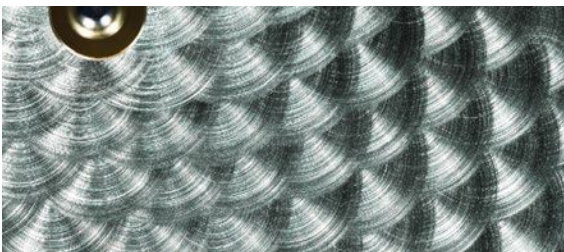
CHAMFERING

Not to be confused with circumferential polishing, this technique is famous throughout watchmaking and is typically pointed out with pride. Edges of plates, levers and bridges are all chamfered, with uniform width and angle as far as possible. Rubber tools are used for softer parts, along with a polishing brush. Steel parts are polished via a rotating wooden wheel.



STRAIGHT GRAINING

There is, believe it or not, no such thing as crooked graining but the word straight is used to distinguish this from circular graining, which is a real thing. Applied to steel parts such as clicks, springs and yokes, this decoration calls for abrasive paper to be drawn across a part in a longitudinal direction. The finisseur's movements should be straight but cautious. The entire part should be covered, right to the edges and corners.



PERLAGE

Well-known to connoisseurs, this technique creates a repeating pattern of clouds that is applied to parts both visible and hidden; typically parts receiving this decoration include inside surfaces of plates and bridges. For A. Lange & Söhne, the main plate beneath the dial is covered in perlage but owners will never see it, of course! Perlage is typically generated with a rotating abrasive peg that gives the briefest of touches, repeatedly, to each component to which it is applied; the artisan begins from the outside of the part to the inside, creating overlaps. The uniformity of the individual marks, called stipples, depends on the skill of the finisseur.

GET SMART

In a new twist, it turns out that traditional watchmakers might be better at making smartwatches than tech companies... WORDS **AKSHAY KHANNA**

The world is awash in wearable technology that no one seems to want. This appears to be the consensus from technology commentators, across forums and sites such as The Verge. Given that the chatter in tech circles can be brutal, quite unlike the civilized prattle of the watch world, commentators trash all the latest offerings. Seriously, I've lost track of how many sites gleefully rip into the Apple Watch, Android Wear and Samsung Gear alike. When the editor reached out to me for my thoughts on this, I jumped on the opportunity to cast a little more shade, this time from the watch media side!

To put it as succinctly as possible, a watch has to tell the time. Now, the tech giants probably think this is about as short-sighted as the idea that the primary function of the mobile phone is to allow people to call each other. Even the most unwieldy smartphone succeeds at being a phone, even if it fails every other test (looking at you Windows Phone). The point, to be clear, is that smartwatches often fail to show the time, because the screen blanks out. Now, there is a group of people who have figured out how to make a wearable that looks like a watch but actually doesn't have much to do with timekeeping. I believe they're called the Swiss watchmaking industry.

The world of watches (no pun intended) has been deeply concerned about the impact of the smartwatch on business. In particular, makers of digital tool watches were probably wracked by paroxysms of anxiety over all the cool apps that were being developed for the smartwatch, all of which spelled doom in great big digital letters for traditional players (who persist in using those digital

letters). Happily, Google, Samsung and Apple apparently have no clue about what people actually want to wear. Doubters need only look to the famously-awful-now-completely-forgotten Google Glass for confirmation that technology companies have strange ideas about what real-life-humans will want to wear.

Watchmakers typically concern themselves with how people want to read the time, and other details connected with the same. The best brands fuss about the lengths of the hands, the size of the windows, the width of the bezels, and the design of the lugs. If you've ever held a smartwatch in your hands, you'll find that precious few have considered any of this – if they have, they've come to the wrong conclusions. Why none of these giants took the time to consider the G-Shock I can't understand but it probably has to do with this point: tech firms think of smartwatches as smartphones with straps. If you don't agree, why do you think the Apple Watch is offered in the shape that it is?

Here's the rub: watches are cool, wearable smartphones are not. Apparently, even if the device offers amazing utility, regular humans will reject it if doesn't both look and wear smart. As interesting as the discourse here is – for a bright shining moment, watches left the realm of niche commentary and entered the mainstream – the problems faced by the smartwatch don't concern me (or this magazine). What is interesting is that watches like the TAG Heuer Connected and the Montblanc Summit have done well, while being much more expensive than other smartwatches. Maybe – just maybe – now is the time for the watch industry to seize the day and make the smartwatch its own. **W**



CHALLENGE EVERYTHING



H₀ BLACK

HYT BOUTIQUE
STARHILL GALLERY,
181, JALAN BUKIT BINTANG
55100 KUALA LUMPUR

THE HYDRO
MECHANICAL
HOROLOGISTS

HYT
HYTWATCHES.COM

TRUE CONNOISSEUR

Fashionable and stylish are two words that are immediately relatable to watch collector Gary Cheok

INTERVIEW AND WORDS BY **KELVIN TAN**



How did you get involved in watches?

Well I started when I was very young. My dad is an avid collector and he got me into it. I first got hooked on the idea to own Breitling. That was simply because Breitlings were associated with pilots and planes and as a kid, I wanted to be a pilot. However, the funny thing is, my first actual Swiss watch was a Graham Chronofighter Oversize Overlord Mark III. This was when I was already a young adult and Graham had their first boutique at Starhill Gallery Kuala Lumpur.


After that, my father insisted that I should get a Rolex as I was beginning my career at that time. However, I did not agree initially. I did however subsequently obtain a Rolex Datejust. It was unfortunately stolen and I have yet to replace it. Perhaps I will buy the blue two-toned Yachtmaster II sometime in the future.

During recent times, I also bought an Arnold & Sons, a Zenith, another Graham and also a Bell & Ross.

Is your collection skewed towards a theme or a particular brand?

My choices of watches can be put into two categories. The first category is a smart casual very outstanding type of watch. The second is a formal dressy type of watch. My favourite watch to wear on a regular basis is the Corum Bubble. I have quite a few of them and am very fond of this series of watches. I have a close relationship with the brand people and have learnt to really appreciate the design and concept of the watch. I also think that the price range of the Bubble is truly reasonable considering its quality. Among those that I wear often are the Zodiac, Paisley and Skull Bubbles.

How do you decide what watch to wear for the day?

I am a shoe freak. I always choose what to wear only after I have decided on the shoes for the day. Then I can decide on my attire and subsequently the matching watch. I have more shoes than watches! 



ONE & TWO

42MM RED GOLD CASE / AUTOMATIC MOVEMENT



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HERMÈS
PARIS

PERFECTLY BALANCED

A. Lange & Söhne debuts the 1815 Annual Calendar, a watch that collectors will immediately note takes a very different approach... WORDS **ASHOK SOMAN**



It seems all watchmaking brands agree that having a date indicator is a must. This is certainly not a given but it is a winning argument for brands from Glashütte, for obvious reasons. No other regional grouping of watchmakers has made an art of putting date displays together such that it becomes a recognisable mark. One significant example is on full display on our cover this issue, but the attendant story simply did not have enough room for the 1815 Annual Calendar model, the last of the notable A. Lange & Söhne new models of 2017 (exempting the ladies pieces, in our moon phase feature on page 152).

Now, A. Lange & Söhne has plenty of loyalists who can wax lyrical about the various types of calendar mechanisms that the manufacture puts together. Those same individuals cannot be counted on to toe the party line and crow about this watch though, lacking as it does the oversized double date display. However, that is not to say it is not worth talking up. The 1815 Annual Calendar makes a virtue of how different it is to its siblings, such as the Saxonia Annual Calendar, for example. Where the Zeitwerk is deliberately iconoclastic, the 1815 Annual Calendar hews close to the lines of demarcating the 1815 collection, itself a tribute to the style of pocket watches advanced by Dresden native and A. Lange & Söhne founder Ferdinand Adolph Lange.

Indeed, by any other standard besides that of the contemporary A. Lange & Söhne brand, the 1815 Annual Calendar is properly traditional. It is a 40mm diameter watch that maintains a slim profile, being only 10.1mm thick. In white gold or pink gold,

it will hide under the cuff, if so required. The month indicator at three o'clock aligns perfectly with the day and date indicators at nine o'clock, all on the same horizontal axis as the hour and minute hands. Along the vertical axis, the small seconds register and moon phase display line up perfectly with the hour and minute hands too. At 12 o'clock, the brand name balances out the registers, taking the spot where the Saxonia date usually is.

As is traditional for A. Lange & Söhne, and typical we might add, this new watch required a new movement, and the manufacture obliged. You could tell this was coming, given the absence of the aforementioned oversized date – the manufacture has no suitable movement for a calendar display like this one. In watchmaking, sometimes what is different becomes significant merely by virtue of being different. The new manual-winding Calibre L051.3 ensures that the 1815 Annual Calendar is different, inside and out. The finishing of the calibre is beyond question, and you will find all the usual touches, as outlined in the cover story (page 72).

Manual correction for the date is required every February, as normal for all annual calendars. For the first time in an A. Lange & Söhne watch, the date can be advanced via an additional recessed pusher, which joins three other recessed pushers to adjust day, month, and moon phase. The button at two o'clock makes it possible to advance all indications at once, but again, it is the little difference in the date adjuster that will stick in the memory of the faithful. **W**



MOVEMENT Manual-winding Lange Calibre L051.3, annual calendar with moon phase; 72-hour power reserve

CASE 40mm in rose or white gold, water resistant to 30m

STRAP Hand-stitched alligator leather

PRICE \$58,600



SQUARELY ROUNDED

If you are a diving watch enthusiast or if you are a diver, professional or otherwise, this watch will make you stand out from the pack, even at a distance

WORDS **ASHOK SOMAN**



As one of the few watchmakers in the business of regularly pushing out form or shaped watches, Bell & Ross occupies a specific niche. However, even with such an iconic shape, which you can see here, the firm's first proper diving watch in 1997 was round. This is simply because one needs a unidirectional rotating bezel, among other things, for a true diving watch. There are many other famous names with famous shapes in watchmaking conforming to the pressure of the tool watch requirements in their own offerings, though we won't name them to avoid making unfair comparisons.

For Bell & Ross though, it seems conformity was merely a passing phase because the BR 03-92 sports the "circle within a square" shape that defines Bell & Ross today, and yet it manages to meet the stringent requirements of ISO 6425 to qualify as a diving watch. Yes, naming conventions are fuzzy in watchmaking but only watches built to specifications of ISO 6425 can be called diving watches.

Given that BR 03-92 is a diving watch, let us look at the specifications here: it is water-resistant to 300m, and stands up to shocks, magnetism, salt water, temperature extremes, and other professional requirements. Impressively, the watch is properly certified so you don't just have to take the brand at its word. In the interest of reliability and performance, Bell & Ross is going with its standard automatic Calibre BR-CAL.302, based on the reliable Sellita SW300; the movement is protected here by a soft iron inner case, which is what makes it anti-magnetic.

The water resistance here is the pièce de résistance for Bell & Ross as the best it has managed with the square case is 100m (that's all that ISO 6425 requires); the BR 03-92 has three times

that resistance. Looking at the case as we did at BaselWorld, this one is significantly thicker than the BR 03-92 Steel and such. Bell & Ross says this increased heft comes from a very thick steel case back (2.8mm) and sapphire crystal (2.85mm). This compares with a case back of 1.8mm and sapphire crystal of 1.5mm in the regular BR 03-92 Steel. Of course, that sapphire crystal has an anti-reflective coating to protect against glare and keep the dial visible. Speaking of which, the dial and its markers are certified to be visible in the dark from 25cm, with the hour, minutes, and seconds all bearing different coloured Super-LumiNova coatings.

All in all, the aesthetics and performance of the watch combined make it worth serious consideration. If nothing else, the Bell & Ross BR 03-92 is exciting because it is a truly unusual timekeeper, because of its shape. If you are a diving watch enthusiast or if you are a diver, professional or otherwise, this watch will make you stand out from the pack, even at a distance. That sort of cachet is nigh impossible to achieve and we salute Bell & Ross for its courage. **W**

MOVEMENT Self-winding Calibre BR-CAL.302 with date; 38-hour power reserve

CASE 42mm in steel, with unidirectional rotating bezel in steel as well as anodised aluminium insert; water resistant to 300m

STRAP Woven black rubber and ultra resilient black synthetic fabric

PRICE MYR 15,900



CRYSTAL CLEAR

Bulgari's Octo Tourbillon Sapphire allows you to peer at an exquisite flying tourbillon from almost all sides **WORDS JONATHAN HO**



T rue Italian swagger can be hard to pull off if one lacks the requisite confidence. Thus, when the original Octo was birthed with 110 facets, it was one of those seminal designs in horology that's an instant hit with a follow-up question – which mortal not descended from the Roman gods could carry this?

Never one to shy away from market feedback, Bulgari responded with a new Octo Roma, “softening” the iconic Octagonal watch with gentler lines and featuring 58 facets while still keeping with the essence of the original's Roman design. The result is that the latest addition to the series, the Tourbillon Sapphire, looks undeniably futuristic (due to the passing resemblance to the Ultratourbillon) while still grounded in many classical elements.

Eleven DLC-coated carbon nanotubes bridges (specifically ITR² or Innovative, Technical, Revolutionary Resin – a hard composite with said nanotube particles) drenched in Super-LumiNova, from eight to four o'clock serve as highly luminescent hour indexes.

One of these bridges even marks out the six o'clock position, cutting into the space reserved for the high-profile flying tourbillon, appearing to bisect it. The flying tourbillon of course compensates for errors in rate caused by gravity whilst cantilevered to the plate, normally providing the appearance of untethered flight. To be clear, there is still no tourbillon bridge here, anchoring the mechanism to the calibre. Instead, the funky bridge represents the

single point the mechanism is attached to the movement.

In any case, the unimpeded view overall accentuates the effect of remarkable depth, serving as a canvas for the 3D architecture, which defines the manually wound manufacture BVL206 calibre. Interestingly, the skeletonised arrowhead hands emphasise the openworked nature of the timepiece, and are manipulated in a never before seen way – a crown press rather than a pull into setting position, allows one to set the hands displaying time. A similar press then returns the watch to regular operations locking the time-setting mechanism.

In terms of proportions, the 44 mm watch (as opposed to standard Roma 41mm models) with 12.5 mm thickness might sound a little daunting but softer lines, tapered lugs and a comfortable rubberised alligator strap with titanium butterfly clasp make the timepiece inviting to wear. **W**

MOVEMENT Manual-winding Calibre BLV206 with 64-hour power reserve

CASE 44mm in black DLC titanium; water resistant to 50m

STRAP Rubberised alligator leather with titanium folding clasp

PRICE Price on application

FLATWORLD

The indefatigable Drive de Cartier collection has yet another model for us to get into, this one introducing a degree of two-dimensionality...

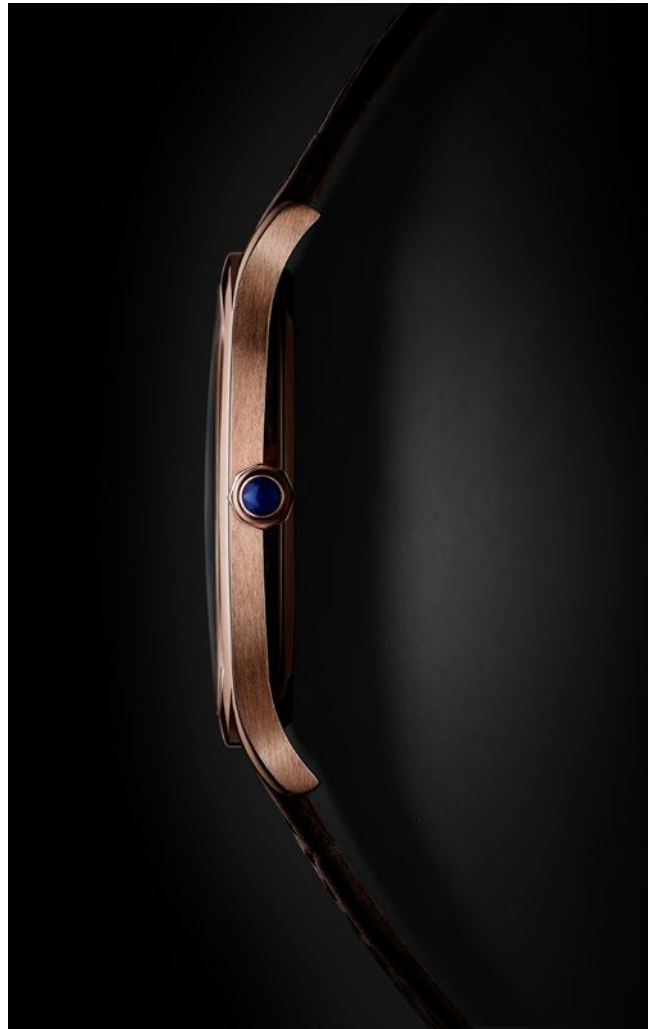
WORDS **ASHOK SOMAN**

This is the year of the panther at Cartier but that doesn't mean there isn't room for a bit of Drive. The Panthère took centre stage at SIHH this year and has been feted around the world in its return to the foreground of watchmaking. The Singapore Panthère party crushed it, as the millennials say, last month, yet as plenty of observers have pointed out, there was never any doubt that the Panthère is a good-looking watch destined for success. Indeed, we wonder why the Panthère languished so long in obscurity, given its prominence in the 1980s.

Anyway, there will be a time and place for Panthère talk. For now, we need to discuss the Drive de Cartier Extra-Flat, especially given that the Tank anniversary will steamroll all other conversation about the brand, as far as men's pieces go. It seems that we have been discussing the Drive de Cartier collection, in one way or another, since it debuted at the SIHH in 2016. This is indeed highly unusual, and it looks like the Drive de Cartier Extra-Flat might represent an epilogue of sorts.

The cushion shape of the Drive de Cartier finds itself in fine elegant form here, with the 7mm height of the Extra-Flat model working quite nicely. In round watches, too little substance can make the case appear undernourished – emaciated even. This is especially true at anything above 42mm in width, and even this estimation is generous. The sort of bezel and lugs make a big difference, of course, but shape seems to be the most important factor, as far as aesthetics goes. The Drive de Cartier is proof positive that form watches are quite suited to the challenge of lending strength to thin chic. It does help that the watch is only 39mm in diameter and has a generous bezel.

If one needs to contrast the Extra-Flat model with anything, by way of confirmation, look no further than the other Drive de Cartier models. Such a comparison would also reveal that the dial of Extra-Flat has a reflective dial bereft of Cartier's usual decorative touches and that the watch bears a closed case back. Now, a closed case back certainly plays to the advantages of keeping ultra-thin watches from looking anaemic, but there is also another matter at play. The manual-winding movement here is the ultra-thin manufacture Calibre 430 MC, which Cartier normally trots out for its ultra-thin watches. It is Cartier's version of the Piaget Calibre 430P and has been featured previously in the Ballon Bleu de Cartier collection. **W**



MOVEMENT Manual-winding Calibre 430MC with 36-hour power reserve

CASE 39mm in pink gold or white gold

STRAP Alligator leather with ardillon buckle in pink gold or white gold

PRICE \$21,500 (pink gold); \$23,000 (white gold)



WAY OF THE SAMURAI

Witness a Grand Seiko Hi-Beat Diver so steeped in Japanese technical and artistic traditions that it will serve just as well in deep waters or a formal dinner

WORDS JONATHAN HO




In addition to the 5s, Seiko is famous for one other category: divers' watches. Armed (no pun intended) with catchy names such as Samurai, Turtle or SKX007, Seiko Divers are not only icons but they also cater to an underserved niche market for affordable, well-built divers' watches. But when the company decides to take a more luxurious, precise and artisanal approach in that genre, what is birthed is a saturation diving watch that not only meets the requirements for reliability but also an approach to aesthetics that borders perfection.

Saturation diving, defined to a depth of 600m, is the *raison d'être* for Grand Seiko's first professional divers' watch. Constructed with a titanium case, resistant against magnetism and equipped with a high-beat movement with 55-hour run time, the Grand Seiko Hi-Beat Diver is a watch that not only exceeds the standards required for saturation diving but also adds aesthetic harmony in form to already laudable functions.

The Hi-Beat Diver is bequeathed with the sort of details one usually finds in its Swiss indie counterparts – a sharp, angular polyhedron case with mirrored facets and chamfered edges embellished with Seiko's vaunted Zaratsu polishing – hallmarks of Grand Seiko's attention to detail lavished on what otherwise might be another perfunctory tool watch. To be clear, they're not small watches – they might be decorated like your dress watches but they're still a sizeable 46.9mm wide and 17mm thick. That said, grade 5 titanium with a combination of brushed and polished finishes on a valve-free helium-resistant case tends to lead one to the misunderstanding that this beauty should see the depths (or knocks) of serious diving.

In fact, the Hi-Beat 36000 Professional 600m Divers' SBGH255/SBGH257 watches may look like Clark Kent, but they're really purpose-built super-dive watches with very functional features like a unidirectional bezel made with supreme operability in mind thanks to the non-slip knurled finish with luminous ten second interval markers for improved legibility – that all this functionality looks elegant is icing on the watch.

The textured dial of the 600m diving Grand Seiko is made of pure iron, giving it the added benefit of magnetic shielding – redirecting the fields across and around the "cage". Thus, it is amagnetic rather than anti-magnetic, delivering a resistance to magnetic fields of up to 16,000 A/m. High functionality is joined with an added boon of wearability when the bracelet is expressly designed for diving with an innovative sliding extension device to accommodate pressure changes.

The Grand Seiko Hi-Beat Diver with the automatic Calibre 9S85 beating within is fully made and tested at the Shizuku-Ishi Watch Studio. 

MOVEMENT Self-winding Calibre 9S85 with 55-hour power reserve

CASE 46.9mm in steel, water resistant to 600m

STRAP Bracelet with three fold clasp with push-button release, secure lock, and slide adjuster. Includes an additional silicon strap

PRICE \$14,157



FIERCE CREATURE

La Montre Hermès shows that fine watchmaking has a sense of humour with the idiosyncratic Slim d'Hermès GRRRRR! watch


WORDS **ASHOK SOMAN**

It might be hard to believe but some watches come with a dash of humour, and such a ticker is the Slim d'Hermès Grrrrr! Yes, the name certainly tickles, and the exclamation mark is as much a part of it as the capitalised styling, but it is the intention here that recommends this watch – and how well it happens to fit with the famously quirky DNA of the Hermès brand. When we heard the name of this watch at BaselWorld this year, we did a double take and (for my part) hoped I did not look incredulous... Indeed, the press release begins this way: "Scare me Hermès."

Hermès, as a watchmaking maison or a fashion house, is idiosyncratic to a fault, and this makes it one of the few big-name watchmakers with a serious funny bone. It is certain that watchmaking takes itself quite seriously, often presenting even the most minor novelty as a revolution in timekeeping. We count on watches such as the Slim d'Hermès Grrrrr! to take the air out of pontificating windbags, which we assure you watchmaking is not short on.

Now, all this is not to say Hermès doesn't take its own watchmaking seriously. On the contrary, the brand has shown with its releases such as Time Suspended and the Impatient Hour that it recognises the value in bringing a little mirthfulness into its

products. By extension, Hermès gets to show off that watchmakers can be, in its own words, mischievous. The mischief here, however, was imported from a painting Alice Shirley had done for Hermès's Autumn/Winter 2016 collection of scarves. As Shirley has said in a number of interviews (specifically with Buro 24/7 last year), humans make themselves conspicuous by their absence in her work. Well, Hermès means for humans to wear these designs so they will in effect become galleries to display Shirley's work – if that is not mischief, we don't know what is.

Putting the "Grrrrr" into the Slim d'Hermès Grrrrr! is a miniature enamel painting of Shirley's work on the white gold dial of the 39.5mm white gold watch. Such work is always a delicate affair, with the artisan employing a brush with extremely fine hairs, applying enamel with the lightest and most precise strokes. After each stage, the dial is fired to lock in the colour and then the artisan continues filling in the colours. The image has a certain lifelike quality, yet in its style, it is more portraiture than photorealist interpretation. The finalised painting is protected by a layer of translucent enamel. The movement is the ultra-thin (2.6mm thick) automatic Calibre H1950, produced in-house by La Montre Hermès. 





MOVEMENT Self-winding La Montre Hermès Calibre H1950 with 50-hour power reserve

CASE 39.5mm white gold; water resistant to 30m

STRAP Smooth burgundy alligator leather with a white gold buckle

PRICE Upon application



LIGHT MY WAY

The HYT Skull Light combines three distinctive watchmaking features in one watch. Fittingly, only three watches will be made

WORDS **ASHOK SOMAN**



When the words “hydromechanical horologists” first floated up to me, courtesy of one of my writers, I confess to being slightly apoplectic. It was 2012 then and there was no such thing as hydromechanical horology, until, of course, HYT came along and confused us all with a press release about the sort of mechanical watch that should not be possible. Five years later, HYT is still the only hydromechanical horologist (and the still the only context in which the term works) but we are happy to note that the confusion is a thing of the past. HYT finds a way to keep new ideas surfacing. Take the HYT Skull Light, for example, which combines the skull motif with the fluid mechanics and mechanical lighting all in one highly distinctive watch.

Now, this watch is a very limited proposition – just three examples – and is meant to celebrate the brand’s first-ever boutique, which happens to be in KL. So, the HYT Skull Light combines HYT’s very first calibre (Calibre 101) with the animated skull (like the Skull Green Eye) style and the LED setup that allows the whole watch to light up, without a battery (which you might recall from the H4 Metropolis). Dedicated fans of HYT might recognise this pattern from the Skull Pocket, which made its debut earlier in the year, and it is indeed effectively the wristwatch version! It even shares the same dimensions as the other HYT Skull models – 51mm wide and 17.9mm thick.

For those who don’t recall the Skull Pocket that well

(unlikely, as it is not a forgettable watch!), here are the salient details about the HYT Skull Light. The fluidic model indicates the hours, obviously, and also provides an approximation of how quickly the next hour is approaching (the fluid inches along in that unmistakable capillary). There is a power reserve indicator in the right eye, which grows progressively darker as the 65-hour power reserve winds down. The left eye contains the small seconds indicator. The LED system is hidden within the watch, basically at six o’clock and is activated by the crown at 4:30. It is entirely separate from the timekeeping functions and must be wound up separately (using the same activating crown).

Aesthetics-wise, the Skull Light is a bit dressy, combining red gold and blackened titanium (DLC treatment). These choices are enhanced by the same gold on the dial for the indices and the numerals, while the skull itself is in blackened titanium. Like the Skull Pocket, you’ll find Clous de Paris finishing on the parts of the dial between the indices. **W**

MOVEMENT Manual-winding HYT calibre with fluid module, LED module; 65-hour power reserve

CASE 51mm in 5N gold and blackened titanium; water resistant to 50m

STRAP Black alligator leather

PRICE \$170,000


OWN THE SEA

The Panerai Mare Nostrum PAM716 was designed for naval officers and is once again available in limited quantities to civilians WORDS JONATHAN HO

The Panerai Mare Nostrum PAM716 is thought to be among the most desirable watches, after chronographs, to never have been made (beyond a prototype) – at least until modern times. It has, through its combination of good looks and name, a certain romantic and aesthetic appeal. The name translates from Latin to mean “Our Sea” – a reference to the conquest of the Mediterranean waters by the Romans. Alongside its reliability, the watch reflects the foundations of a brand forged in the crucible of war (although not quite so far back as the Roman era – Ed).

A limited edition chronograph remade from another limited edition chronograph (the original being the 52mm behemoth 1943 prototype intended for naval officers that never got made), the original 42mm civilian re-edition was launched in 1993 and along with the now-legendary Mare Nostrum Slytech 5218-304. In 1997, Richemont (then Vendôme) acquired the brand and released a Mare Nostrum with a face-lifted dial, moving minute rails towards the periphery and, most notably, giving the bezel a polished inner ring with indexes matched to the tachymeter scale on the outer ring. The 2017 re-issue Mare Nostrum PAM 716 follows the same faithful recreation of the civilian classic (read: 1993 version) save for the additional text on case back and crown.

The latest Mare Nostrum enjoys the same blue dial as the first edition but a notable aesthetic detail can be found in the effort taken to “age” the Super-LumiNova on the hands and indexes. It is now a tan shade that mimics the tritium lume on the 1993 pre-Vendôme original, which was initially white but matured into a creamy brown.

In addition to the physical and aesthetic similarities (42mm stainless steel case with round chronograph pushers and 60km/h tachymeter bezel), the limited edition 1,000 piece Mare Nostrum also returns with the same hand-wound, COSC-certified OP XXXIII calibre, exclusive to Panerai, based on ETA 2801-2 with Dubois-Dépraz module, which was found in the original model; and like said original, it also comes in a similar Luigi Durand De La Penne, an Italian Navy destroyer, shaped box from the same period of that first civilian Mare Nostrum. 



MOVEMENT Manual-winding Calibre OP XXXIII with 42-hour power reserve

CASE 42mm in steel; water resistant to 50m

STRAP Blue alligator leather with clasp

PRICE \$14,600





BIG & BOLD

To celebrate two decades of its sportiest watch, Patek Philippe substitutes steel for white gold and black for blue in the new Aquanaut Ref. 5168G

WORDS JOHN NG



It's one celebration after another for Patek Philippe. In 2016, the Nautilus collection turned 40 – and this year, it is the 20th anniversary of the sporty, yet chic and contemporary Aquanaut series. To commemorate the special occasion, the Geneva-based manufacture has created a huge buzz with a decidedly rugged and masculine model that is water-resistant to a depth of 120m.

The Ref. 5168G is the first Aquanaut wristwatch for gents to be presented with an 18-carat white gold case where you will find the warmer shade actually sets it apart from the rest in stainless steel. Moreover – paying tribute to the original 1976 Nautilus of the same size that was dubbed “Jumbo” – the 42mm rounded octagonal bezel makes it the largest of its kind, albeit the overall design remains unaffected. With the skillfully embossed checkerboard pattern, the dial provides just the right stage in striking blue colour that turns black at the very edges for the applied Arabic numerals in white gold with Super-Luminova coating. Another new facet of the hefty beast: the luminous five-minute markers are set by hand appliques in 18-carat white gold. The sapphire case-back reveals the precise and elegant self-winding movement that is the calibre 324 S C. They might not be drastic, but definitely different from the Aquanaut you're familiar with.

Encased within the white gold case, the movement marries all the hallmarks of traditional haute horlogerie with state-of-the-

art high-end technology. Merely 3.3mm in height, it is so flat that, even with the seals and gaskets, the complete watch measures to just 8.25mm in thickness. The heavy central rotor in 21-carat gold, which is endowed with an engraving of the Calatrava cross (a registered Patek Philippe trademark element), stores energy from every movement of the wrist, offering a remarkable maximum deviation of -3 to +2 seconds per day. The finissage of the movement has just as much to shout about: Geneva striping, countersunk and polished bores, gold-filled engravings, and round-chamfered, polished edges that draws attention to the shapes of the individual bridges.

To round up the Ref. 5168G, the blue strap showing off the classic Aquanaut pattern – outfitted with a double-security fold-over clasp in 18-carat white gold – is extremely comfortable on the wrist and, abrasion-, UV- and water-resistant. **W**

MOVEMENT Self-winding calibre 324 S C with 45-hour power reserve

CASE 42.2mm in white gold; water resistant up to 120m

STRAP Midnight blue “tropical” composite strap with fold-over clasp



PYRAMID GIG

The formula for a rockin' mash up is simple with Hublot's partnership with Depeche Mode

WORDS YONG WEI JIAN



MOVEMENT self-winding HUB1242 calibre with 72-hour power reserve

CASE 45mm in knurled and polished ceramic; water resistant up to 100m

STRAP Black rubber and calf cuff strap with black-plated studs

Hublot and Depeche Mode have already shared their passion for philanthropy on three occasions since 2010, and now the watchmaker and post-punk pioneers reunite once more to confirm their commitment to charity: water, a non-profit organisation whose mission is to bring potable water to people in developing countries. The latest partnership coincides with the band's 14th album *Spirit* and its upcoming Global Spirit Tour, and is backed by another 250-piece limited edition timepiece. Like previous models, the Big Bang Unico Depeche Mode flaunts the distinctive Clous de Paris studs, this time in a 45mm knurled ceramic case carved with thousands of pyramids that extend to the crown, push buttons, and indexes. The watch is also adorned with a detachable studded cuff. **W**

MEASURED RELATIVITY

What would we do without the Girard-Perregaux 1966 WW.TC that relays the time of foreign cities in a stylishly elegant manner **WORDS JASON KWONG**



In 1990, the brand unveiled its first world timer wristwatch and this year's WW.TC (World Wide Time Control) is a continuation of a collection that has since 2000 impressed with an exquisite world time function to go along with a day and night indicator. Unerringly like how its abbreviation expounds, this is a watch that strips the chronograph and date functions from its predecessors to adapt to a 40mm dressier setting. Fitted with an in-house self-winding GP03300 calibre with 46-hour power reserve that took years to develop and manufacture. The rose gold rotor finishing on the movement partially conceals the exquisite circular-grain and Côtes de Genève finishing. A reason for the watch's bigwig status is, of course, the ability to adjust the rotating 24-hour disc by way of a second crown at '9' in both directions. The white/black division separates the day from the night. The etchings of the 24 major cities on the outer rim of the dial can then be easily

determined with the time in one's home country as a reference. It's also hard to fault the stubbier leaf-style hour and minute hands as they are not intrusive on the outer rings. In a way, legibility is not undermined and the unfettered dial design is commendable for being coherent. After all, travelling the world, like time-telling should ideally come with less baggage. A small seconds sub-dial indicates that everything is moving along swimmingly. **W**

MOVEMENT Self-winding calibre GP03300 with 46-hour power reserve

CASE 40mm in pink gold or stainless steel; water resistant to 30m

STRAP Black alligator leather strap or stainless steel bracelet

HOUSE OF SLITHERING

The Brown Serpent Calendar is an update for the new-fangled Speake-Marin devotee WORDS **JASON KWONG**



The Serpent Calendar is a constant on the Speake-Marin roster that has been a shot in the arm to ensure its immortality. Retaining the charm of the original conceived by Peter Speake-Marin – who had a knack for melding understated aesthetics with horological complications – subtle adjustments have been made without imposing on the recognisable aesthetics of this independent watchmaking company.

The design cues are omnipresent. But the real coup here is the satin-finished dial in white and chocolate brown is crisp with legibility is accentuated by the new slithering gold gilded date hand. This dial attribute comes alive again and the idea of using a curved hand to differentiate the date from the time indicators is reminiscent of early pocket watches more than a century ago. Not immediately apparent, other visible enhancements introduced include an enlarged calendar and hour chapter ring that is lorded over by familiar blued hour, minute, and seconds hands.

And in the Speake-Marin tradition that differentiates its mechanical marvels, the 42mm Piccadilly case is a constant. As a surprising nod to ergonomics, the case back and the seemingly straight lugs do rest comfortably in the wrist. As you might expect, a Vaucher 3002 automatic movement that's assembled by hand is fitted snugly inside the case. Limited edition of 28 pieces in titanium with alligator leather strap. **W**

MOVEMENT Self-winding Calibre Vaucher 3002; 50-hour power reserve

CASE 42mm in titanium; water resistant to 30m

STRAP Black alligator leather with titanium pin buckle

RUBBER SET

Roger Dubuis introduces Pirelli into the world of fine watchmaking with two Excalibur watches and a special experience for owners of the Excalibur Spider Pirelli Double Flying Tourbillon WORDS **JONATHAN HO**





Dare to be rare. Introduced by Roger Dubuis as a sort of mantra, these words belie the ubiquity of partnerships between automakers and watchmakers. Timekeeping is indispensable to both racing drivers and to the production teams that develop and build automobiles. The colourful Roger Dubuis Excalibur Spider Pirelli Double Flying Tourbillon represents something of a twist here. At the SIHH this year, the Geneva watchmaker was selling its partnership with tyre-maker Pirelli. This is sort of a perfect fit in our view mainly because there wasn't a car in play, just rubber. In this case, there is no car to distract from the story of the watch, just a fancy technology specialist with its own powerful brand identity.

As clever as this might seem, there are inherent problems because rubber is not a rare material. Nevertheless, the manufacture is all in on the partnership, literally calling it "The Perfect Fit" (#theperfectfit).

The very exclusive 47mm Roger Dubuis Excalibur Spider Pirelli Double Flying Tourbillon offers something for owners that regular watchmaker/automaker pairings do not: the winning touch. As we reported in Issue 45, the straps for this model – and the Automatic Skeleton model – are made from actual used rubber of winning cars collected from F1 tracks. It is not the same rubber that Pirelli uses in its F1 programme, it is literally the rubber that the winning drivers have burned. The material is effectively recycled by Pirelli and turned out as straps, echoing the motif of the Pirelli Cinturato intermediate race tyre.

Indeed, both Excalibur Pirelli watches look very much like race tyres, with the bridges resembling the rims of the wheel. This is incidental though as this look is thoroughly part of the Roger Dubuis DNA. Well, the blue colour used here is a nod towards the partnership, but virtually any given Roger Dubuis skeleton

model bears a resemblance to a deconstructed racing wheel; now it finally has the rubber to go with it. It also has blue vulcanised rubber encircling the movement (this actually forms the case middle and is visible from the side, which is again a regular characteristic for this model) and around the crown.

As always, the most unusual bit about the Roger Dubuis double tourbillon execution is that both tourbillons act as small seconds registers, working independently yet together. What's unusual here with the manual-winding Calibre RD 105SQ is the multi-coloured power reserve indicator. Roger Dubuis does not say much, but we have never seen a power reserve indicator on this watch, so this might be a premiere of sorts.

This limited edition also bears the codes of something a little more interesting than a company-level partnership: a benefit for the owners. All eight owners of the Excalibur Spider Pirelli Double Flying Tourbillon will get an exclusive all-access F1 pass courtesy of Pirelli in a move Roger Dubuis characterises as an experience that money can't buy. This is the cherry on the cake, of course, given that the owners already have a piece of history on their wrists in the form of racing-winning tyres. **W**

MOVEMENT Manual-winding Calibre RD 105SQ with double flying tourbillons, power reserve indicator; 50-hour power reserve

CASE 47mm in black DLC titanium

STRAP Rubber, with inlay combining rubber from Pirelli tyres

PRICE \$484,000

DIAL IT UP

For its 10th year in action, the Rolex Yacht-Master II is spruced up with a few defining touches **WORDS ASHOK SOMAN**



As the go-to name for people in search of quality timepieces, Rolex has done an admirable job balancing the need to push out new designs and technical innovations with staying the course with tried-and-tested watches. Indeed, the comparison is often made between Rolex and Porsche, two brands that make a virtue out of constantly innovating while appearing to do not much of anything. When Porsche does something outside the strict parameters of what its fan base and observers expect (that means the Cayenne, Macan, and Panamera), it raises eyebrows years after the initial shock fades. So it goes with Rolex and the Yacht-Master II (well, arguably the Sky-Dweller too).

First of all, critics of the Yacht-Master II will be pleased to discover that Rolex has not changed the size or the appearance of the words “Yacht-Master II” on the bezel. As they say, haters gonna hate, and they can keep right on with their hateful ways. The updates are quite subtle and might get lost in the crush of visual cues that remain the calling cards of the Yacht-Master II. New for 2017 are the dial and the hands, basically. So-called Mercedes hands, much like the ones used in the Rolex Yacht-Master, make an appearance here, with the minute hand skeletonised and the hour hand fitted with a luminescent disc (featuring Chromalight, a Rolex exclusive). A triangular hour marker appears at 12 o’clock, with a rectangular one at six o’clock, helping legibility.

OK, that introduction should serve to show that this is among the most polarising Rolex watches. Some 10 years after its launch,

we thought the brand-that-wears-the-crown might give us a bit of a celebratory piece. It did debut a new version this year, but it is an evolution, very much in line with how the other models proceed through the years.

This mild disappointment aside, it must be noted that the Yacht-Master II retains the services of the automatic Calibre 4161 and continues to feature that thrilling bezel-activated timing function. We shall not go in-depth into this since nothing has changed here, but suffice to say that the Yacht-Master II is a very particular kind of chronograph. It has a programmable countdown function with a mechanical memory of sorts. This very specific function is meant to help regatta crews time the countdown to the start of a regatta.

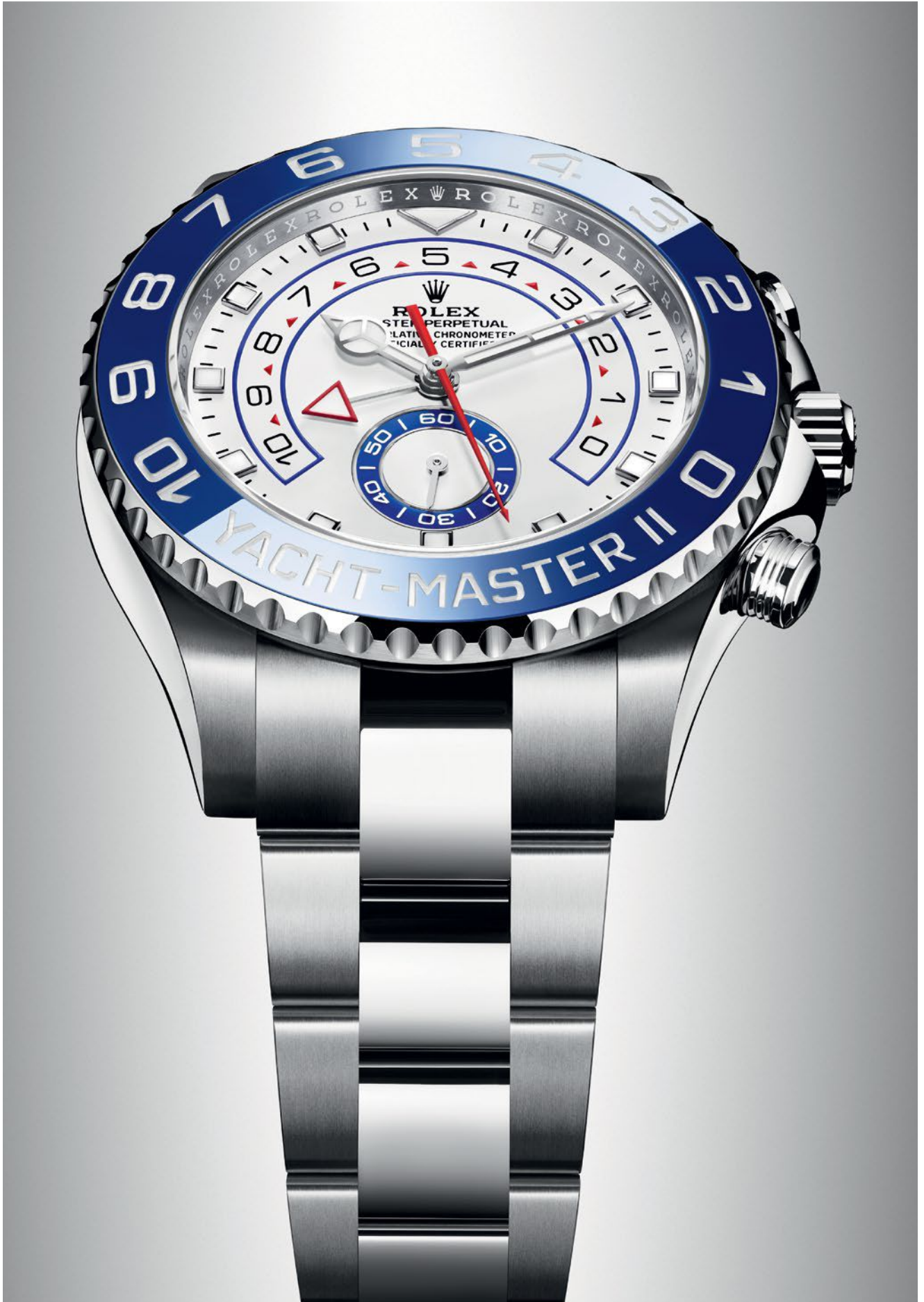
Rolex informs us that the watch retains its 44mm proportions and will be the new reference for this model, with the 904L steel, Everose Rolesor (steel and Everose gold), white gold and platinum bi-material, and full yellow gold versions all sharing the new characteristics, which means all the old versions are done. **W**

MOVEMENT Self-winding Calibre 4161 with regatta chronograph; 72-hour power reserve

CASE 44mm in steel, yellow gold, Everose Rolesor or white gold and platinum

STRAP Rolex Oyster bracelet with Easylink clasp

PRICE \$25,120 (steel)



BRONZE AGE

Montblanc showcased its new bronze adventure ahead of the SIHH. We take a closer look at the 1858 Automatic here **WORDS ASHOK SOMAN**



Three weeks after you start wearing the Montblanc 1858 Automatic, it should start to change colour. This isn't a flaw, it is a feature. As hyped on our cover in Issue 43, the three watches of the 2017 collection are the first to feature bronze in their cases. Although the Montblanc 1858 Chronograph Tachymeter Limited Edition was the only model to be fully cased in bronze, the other two fused bronze and steel, in heretofore unseen bicolour editions. In the Automatic, the entire case is in steel, including the case back, but the bezel and crown are rendered in bronze.

Now, there's all manner of bronze used by quite a number of contemporary brands, including Montblanc's Richemont peer Panerai. For its purposes, Montblanc opted for the aluminium-bronze variant, which combines copper with aluminium as opposed to the regular copper-tin alloy. Just like the Chronograph then, this 44mm watch offers its owner the chance to chart the patina over the course of time; obviously the steel bits won't be affected in the least, but remember that patina is a tricky matter and you won't know in advance exactly what the developing colour combination will look like.

Adding to the contrast game here is the dial, which references the pilot's watches from the 1930s – this is obviously a nod to the Minerva branch of Montblanc because Montblanc was not engaged in watchmaking at that time. Similarly, the cathedral hands and the Arabic numerals all pay tribute to the style of watchmaking Minerva was engaged in way back when. Those hands and numerals are enhanced by period-appropriate beige Super-LumiNova, adding to the old-is-gold feel. The Montblanc

logo, in vintage form is interesting here, as Montblanc was in business from 1911, so this might actually be the proper logo from the pre-World War II period. Future archaeologists who find this watch in some ruin will certainly be left scratching their heads...

Like the watches of old, this one has a closed case back – the Chronograph has a sapphire case back to showcase the fine finishing touches of the Villeret watchmakers. The movement hidden away beneath the engraved case back is the automatic Calibre MB24.16, which is basically the Sellita SW260 movement that Montblanc has previously used in other forms and variants, with and without small seconds and date.

The entire aim of this timepiece, as opposed to the Chronograph, is to offer something novel at a competitive price, as confirmed by Montblanc watch division managing director Davide Cerrato. "Matching bronze and steel, which had never been done before, was...perfect... because you could have the patina on the bezel and crown, but keep things affordable with the rest of the watch in steel." **W**

MOVEMENT Self-winding Calibre MB 24.16; 38-hour power reserve
CASE 44mm in steel with bronze bezel; water resistant to 30m
STRAP Cognac aged-calf leather and satinated steel buckle
PRICE MYR 16,800



SOMETHING'S COOKING

Rado channels 1960s swagger and retro appeal with the re-issue of its bestseller, the Captain Cook divers' watch, making it one of the hottest releases from BaselWorld this year **WORDS JONATHAN HO**



With faithful homage to design cues from Rado's 1960s best-selling divers' watch, the new HyperChrome model delivers bezel and case aesthetics that look the part of the old watch but faithfully maintain the brand's current material edginess. The result is the new 37.3mm HyperChrome Captain Cook that hits all the right spots for a heritage re-issue. Vintage styling meets modern technology thanks to the high-tech black ceramic insert within the unidirectional turning bezel.

Furthermore, the apparent dome shaped crystal appears at first blush to be Plexiglas (like the sort found on some Omega Speedmasters) but it is really modern sapphire crystal for durability. For reference, take a look at both the current model and the original. Unfortunately, there is only one high-resolution image of the original provided, but we'll track this online on Luxuo.com.

In terms of dial design, oversized indexes and a distinctive chunky arrow-shaped hour hand really sell the retro appeal of Rado's new HyperChrome Captain Cook. While minute rail markers on the rehaut on the periphery keep the dial from being too cluttered. The Rado logo on the dial is worth noting as well, with the little anchor rotating to indicate that the watch is automatic, which is apparently traditional for the brand (there is no "Automatic" word on the dial, as would be normal for other firms).

Now, you may wonder why this particular model was selected for 2017 given that entire generations may have no recollection of the Captain Cook watch, or indeed that Rado ever made tool watches. This might be precisely the point, although we are speculating on that part. It might also be that this is just another tool watch in a deluge of such watches from various Swiss, Japanese and Germans brands.

In addition to the 37.3mm steel model here, there is also a 45mm version in titanium, which takes the water resistance to 200m. The 37.3mm version is, of course, true to the original Captain Hook and is thus limited to 1,962 pieces (no prizes for guessing why this number in particular). **W**

MOVEMENT Self-winding ETA C07.611 with date; 80-hour power reserve

CASE 37.3mm in stainless steel with black high-tech ceramic insert; water resistant to 100m

STRAP Brown vintage leather with stainless steel pin buckle

PRICE MYR 7,260



PLOT TWISTS

Two can play that game as Charriol's refreshed collections brandish feminine lines and a hint of playfulness WORDS **JASON KWONG**



While sizeable mechanical tickers are often seen on elegant wrists these days, there's something about glamorous throwbacks that are sultry like Anne Bancroft in *The Graduate*. First off is a watch that is anything but submissive. Differentiated by graceful contours in a 35mm stainless steel round case with gem-set bezel and lugs, Charriol's new St-Tropez will win converts with green tsavorite or white sapphire options. The stones used in the Greenlight model are notable for being a shade lighter (and brighter) than emerald. Hence, a little extra sparkle goes a long way in putting pep in the strut of its owners. The Baguettes version is no pushover either.

The uncluttered round dial is an affirmation of quiet sophistication. Notwithstanding the delicate dimensions, this very dear quartz watch comes with a white mother-of-pearl dial that features bejewelled hour markers and a date window at six o'clock. Exuding refined aesthetics, it is paired with a proprietary open-ended cable bracelet constructed from a titanium and stainless steel alloy. Complementary details include a pair of decorative clips and a marine chain.

On the other hand, the more accessible Twist is a little friskier with Charriol's black serpentine double-twist bracelet that is made from five wiry 2mm cables embellished with rose gold PVD hardware. Three varying lengths are available up to 35cm.

Housed in a 32mm elliptical case that's plated pink gold over stainless steel, it comes in a version that is adorned with 50 white diamonds around the bezel. Its elfin proportions are accentuated with a pitch-black dial with rose gold Roman indexes and a domed crystal that adds to the vintage appeal of this quartz number. There is no date aperture and it's more suited to slimmer wrists. **W**

ST-TROPEZ

MOVEMENT Quartz with date display

CASE 35mm in stainless steel with tsavorites or white sapphires

STRAP Stainless steel cable bracelet with décor clips and marine chain

PRICE \$36,800

TWIST

MOVEMENT Quartz

CASE 32mm in stainless steel with rose gold plating

STRAP Black PVD stainless steel cable bracelet with pink gold plated end pieces





DEEP GENEROSITY

Exaggerated proportions have overtaken the design philosophy of divers' watches but Citizen's latest is clearly a titleholder that flaunts its utilitarian capabilities

WORDS JASON KWONG



MOVEMENT Eco-Drive J210 Eco-Drive quartz movement with power reserve indicator

CASE 52.5mm in super titanium alloy; water resistant to 1,000m


STRAP Black polyurethane

PRICE \$3,333.50

Holding fast against the onslaught of generic dive watches, the new Citizen Eco-Drive Promaster Professional Diver is a big boy that's not going to splash around in the waddling pool with the rest. Decidedly huge, it is proudly the first Citizen watch to combine Eco-Drive technology with 1,000m saturation diving capabilities. With a reputation for quality micro-engineering right down to the nitty-gritty like case cutting and materials, there is no room for doubt that this sits on the heavy end of the seesaw – with the ultra-light Eco-Drive One dangling on the other extreme of the light-powered end.

Created with the input of JAMSTEC (Japan Agency for Marine-Earth Science and Technology), the 52.5mm super titanium case is a lung-buster that assimilates design cues from the horned turban shell. An earlier prototype was attached to the Shinkai 6500 submersible to ensure that it will function at depths greater than 1,000m below the surface of the ocean, in the pitch-black depths.

Function-wise, the ridged bezel-locking system prevents unintentional changes, once in use; a sliver of orange signifies that it may be freely rotated. The edges are jagged and resemble circular blade saws, but they will work swimmingly when strapped over a wetsuit. To cap things off, a hint of orange also indicates when the crown is not screwed down fully. A requisite automatic helium release valve adds to its saturation diving appeal while the cut-outs in the hands are a nice touch. The hour hand is a little stubby but that's fine as its girth allows the time to be determined accurately.

Is it necessary to have a power reserve indicator when the solar-powered J210 Eco-Drive quartz movement can soldier on for more than two years after a full charge under the sun? That's debatable, and buyers will likely consider it an ingenious aesthetic add-on that doesn't sacrifice design integrity. There are no lugs on the case and the black polyurethane strap looks like it slid through the watch like a fabric NATO strap. Clearly meant for industrial applications, it will nevertheless titillate fans of Japanese diving watches who appreciate not just strength but also stamina. Only 35 units are assembled daily by the lab coats at Citizen in a dust-proof cleanroom. 

MASTER AND COMMANDER

What better way to communicate some gravitas without breaking the bank than with the Flagship Heritage 60th Anniversary from Longines?

WORDS JONATHAN HO

Heritage watches carry the weight of provenance and when a vintage model gets re-issued, there's a dichotomy of commercial musings: it either hits all the right spots with watch lovers or it deviates too far from all the elements that made it a brand icon and alienates fans of the original model.

Every so often, a new-old classic delivers a sweet note in a respectful homage to the original timepiece, and for BaselWorld 2017, 60 years after the launch of the first model, we get a true classic gent's watch in the form of the Longines Flagship Heritage 60th Anniversary.

Gifted with a silvery opaline dial and slim, barely-there bezel, the Flagship Heritage was driven by a large manually wound 30L calibre. Taking its namesake from the idea of the Fleet Admiral's ship, a flagship caravel relief is stamped on the case back in the



same tradition of the predecessor. The brushed silvery dial is adorned with eight indexes and four Arabic numerals, in yellow gold or rose gold.

The Longines Flagship Heritage is available in numbered, limited edition models in precious metal: yellow or rose gold, and steel variants, using a modified ETA 2892 made exclusively for Longines as an L609 mechanical calibre in a classic 38.5mm case. Exclusive, precious metal editions are limited to 60 pieces each while 1,957 pieces have been produced in steel. **W**

MOVEMENT Self-winding Calibre L609 (ETA 2895/2) with 42-hour power reserve

CASE 38.5 mm in steel, yellow gold or rose gold; water resistant to 30m

STRAP Brown alligator with buckle

PRICE \$3,040 (steel); \$11,930 (rose or yellow gold)



TORQUE DESIGN

Summing up the slick functionality of Casio's Edifice EQB-800 Race Lap Chronograph is easy when staying true to its racing pedigree

WORDS JASON KWONG



We dare say that Casio retains the same unsullied Japanese microengineering sensibility that can be found in the new Edifice EQB-800 Race Lap Chronograph. Simply, it has smartphone linkage capabilities because of the new Connected Engine technology and a three-dimensional retrograde hand that moves like a tachometer whenever the mode is alternated between stopwatch, battery level, and smartphone pairing.

The watch's fluid form goes well with the sublime blue of the bezel and corresponding accents on the dial and seconds hand. They collectively allude to the scheme of motor racing. Better still, racing fans will especially appreciate the target time indicator at 12 o'clock that will allow the wearer to intuitively gauge the progress of each lap based on the target time. A countdown is activated ten seconds before the target time.

For pit crews, it aids in determining approximately when a race car will be returning to a certain point on the track. A less professional application is also conceivable for spectators of a race: a benefit of being able to figure out when a driver will come into view again. We're aware that fastidious analytic nuts will gleefully pour over recorded stopwatch data on a paired smartphone. Not forgetting, its effectiveness includes the ability to display not only units of 1/1000 seconds, but also in a graph that can highlight fun facts such as underperforming lap times.

Powered by Tough Solar, the EQB-800 performs auto time adjustment four times a day using the Accurate Time System, which also updates the watch's internal data on daylight savings time and time zone differences from the smartphone. It also features a worldtime function that allows desired cities to be set with just a tap using the dedicated app. **W**

MOVEMENT Casio Connected Engine with 25-month operation in power saving mode on a full charge with Target Time Indicator

CASE 53.5mm x 49.2mm in stainless steel; water resistant up to 100m

STRAP Stainless Steel Bracelet

PRICE MYR 2,199

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HEAVENLY HOURS

Time is indeed relative but a good watch can light the way through the world

PHOTOGRAPHY **GPS** ART DIRECTION AND STYLING **MAG BONG**



Roger Dubuis Excalibur Automatic
Skeleton in DLC titanium, \$89,000



Franck Muller Vanguard Gravity Skeleton in blackened titanium, \$208,736



Audemars Piguet Royal Oak Perpetual Calendar in yellow gold, \$134,200



Panerai Luminor 1950 PCYC 3 Days Chrono Flyback Automatic PAM654 in stainless steel, \$17,650



Chopard L.U.C XPS in platinum, \$35,850



HYT H2 Tradition in white gold and titanium, price on application



Hermès Slim d'Hermès Quantième Perpétuel in rose gold, \$56,880



Patek Philippe Aquanaut Ref. 5168G in white gold, \$50,800



Cartier Drive de Cartier Extra-Flat in pink gold, \$21,500

A close-up, high-angle shot of a luxury watch movement. The watch has a polished metal case and a dark dial. The movement is visible through a transparent sapphire crystal case back, showing intricate gold-colored gears, a blue hand, and a white balance wheel. The watch is positioned on the right side of the frame, with the rest of the image being a solid black background.

ON TOP OF TIME

Reflections on essential themes, core values, and key market trends



CONTINUUM MECHANICS

Watchmaking is built on a somewhat obscure heritage of observing the motion of celestial bodies, and accounting for the influence of gravity and magnetism. Here are 12 objets d'art making spectacle out of science

WORDS **JONATHAN HO**





Since prehistoric times, mankind harboured ambitions to tame our natural environment by studying and quantifying observable natural phenomena. Even before the idea of “natural philosophers” (we’d recognise them as scientists today) took hold, empirical investigations were probably underway. By the time we developed early writing systems, our tracking of celestial objects like the moon on cave walls and bone-sticks established astronomy as one of mankind’s oldest natural sciences. Why? Watching the sky is easy and, arguably, fun.

Combined with the study of mathematics, the ancient Egyptians were able to geometrically optimise farmlands and track the Nile’s annual floods. Once writing and mathematics had advanced sufficiently, it was only a matter of time before our observation of the stars would be matched with the science of engineering.

Evolving from early Agrarian calendars based on observations of the Sun and Moon, to determining our planting and harvesting cycles according to natural phenomena (like seasons), the ultimate (at that time) leap was made towards fairly complete records of motions of the stars and planets on clay tablets by the Babylonians; eventually, we reached a zenith with astronomical data compiled by the Mesopotamian civilisations overall, still referenced by modern scientists to develop arithmetic equations to compute changing daylight hours throughout the year. With the arrival of the first astrolabes in classical antiquity, it stands to reason that our earliest watchmakers were also equally obsessed with the study of the cosmos and our planet’s position within it. Over the course of history, we mastered not just the reckoning of time but also began to accrue an increasingly sophisticated understanding of the stars.

OUR RECKONING OF TIME: A SHORT HISTORY

It is hard to imagine that our current sexagesimal system (with 60 as its base – 60 seconds to a minute, 60 minutes to an hour) of time measurement is something for which we can thank the Sumerians. Give or take a few centuries, and we find the ancient Egyptians tracking time by observing the natural rhythm of daylight through large obelisk “sundials”. These would progress to water clocks or clepsydrae, a technology known to the Greeks, Romans, and the Chinese Zhou dynasty as well. But it was in 1291 that Umar ibn Yusuf, a Rasulid prince, constructed an astrolabe – an inclinometer used by astronomers and navigators to measure the inclined position of celestial realm. By identifying stars and planets, one could determine local latitude with local time. Humanity would then begin to triangulate and (somewhat) accurately document our journey across the world through this process.

Even in China, astronomer and horologist Su Song would build a water-driven astronomical clock in Kaifeng, but the most sophisticated geared astrolabes of the time would belong to Islamic astronomers and mechanical engineers. Thus, it becomes evident that with religious motives driving our understanding of the Heavens, the European watchmaking advent would also be driven by medieval Christian monks. At first, watchmakers (and by extension, everyone else) simply tracked the hours, but we eventually began to track 15-minute intervals as demonstrated in Peter Lightfoot's Wells Cathedral clock c.1300s. Yet, whether it was the geocentric, pre-Copernican view of the universe or the heliocentric model eventually accepted by the Church, we were constantly looking to accurately track the skies for answers. It would take another 200 to 300 years before the first clocks indicating minutes and seconds would appear in 15th century Germany. Exceedingly uncommon, the ever-increasing precision of these instruments was made possible by the advent of the spiral balance spring. These instruments would be used by men such as 16th century astronomer Tycho Brahe to further advance our ability to plot stellar positions.

In a related development, pocket watches of the Renaissance were very much inspired by astrolabes and clocks, with mechanical calendars from this period often displaying hours, all the calendar indications including day, date and month, phases and even ages of the moon, and also the constellations aka signs of the zodiac. Astronomical watches, as they were known, persisted in popularity throughout the 17th century until the advent of the Industrial Revolution, where an interest in day-to-day timing precision came to the fore with the increasing use of machines to improve efficiency and simplify labour.

If this prelude seems a tad like a lecture, it is only to impart the gravity of provenance and academia devoted to our perception of space and time. What we see today are exemplars of timekeeping, emblematic of mankind's scientific progress. As the story looks at progress in general, we look beyond representations of the skies, but these sorts of pieces necessarily form the bulk of the selection. It is worth remembering though that every watch represents something we can't see: the rotation of the Earth on its own axis. As the hands of time move, so too does the ground beneath our feet.

One thing this story does not include is the so-called “gravity-defying” tourbillon, which does nothing of the sort. Of course, we haven't steered completely clear because some watches have indeed employed gravity properly...





VAN CLEEF & ARPELS MIDNIGHT PLANÉTARIUM

A planetarium or planetaria is used to unveil the mysteries of the cosmos with moving mechanical models of the solar system. Celestial objects are visually represented and used to demonstrate their orbits in relation to one another. Planetaria are also known by another term – Orrery, named after the fourth Earl of Orrery (more on that in a bit).

The Midnight Planétarium builds upon astronomer Nicolaus Copernicus and Galileo's heliocentric theory by showing how Earth, Mercury, Venus, Mars, Jupiter, and Saturn all revolve around the Sun. Considered a miniature planetaria on the wrist, I consider it an act of historical poetry because the Midnight Planétarium's dial only reproduces visible celestial bodies much as it looked like during the time of Copernicus when Neptune and Uranus were undiscovered (Pluto doesn't enter into it, so don't make it a thing – Ed). The module that makes the precise motion of the planets possible was conceptualised by Christiaan Van Der Klaauw, with each planet on the face of the Midnight Planétarium orbiting on its own starry aventurin disc at its real-life speed of rotation. That is to say, on your watch, as in the Heavens, Saturn completes its orbit in 29 years; furthermore, ingeniously designed gear ratios communicate the precise positions of the planets (represented by gemstones) in relation to Sol (the Sun, represented by a pink gold sphere) on any given day – thus, if one kept the watch for at least that long, you could be assured of the knowledge that you know exactly where Saturn and the other planets are supposed to be, in relation to each other, 29 years later.



VACHERON CONSTANTIN MÉTIERS D'ART COPERNICUS CELESTIAL SPHERES 2460 RT

How is there a modern wristwatch tribute to the 17th century Orrery but none to Nicolaus Copernicus, Polish mathematician and astronomer? Well, have no fear, Vacheron Constantin Métiers d'Art Copernicus Celestial Spheres is an answer to that unfortunate oversight.

The watch boasts a *champlevé grand feu* enamel dial decorated with a raised relief astronomical map of the Copernican heliocentric system created in the style of Andreas Cellarius, famed 17th century cartographer. The Copernicus Celestial Spheres expresses Vacheron Constantin's fine *métiers* with the exquisitely hand-engraved zodiac signs (as in constellation depictions and not just the symbols, those are found on the bezel) on the second dial. Impressively, the axial rotation of the Earth is demonstrated with continents of the Northern Hemisphere facing toward or away from the Sun depending on time of day every 24 hours. Meanwhile, the domed disc, on which the Earth is represented, makes a full rotation around the Sun once every 365.2421898 days. The Métiers d'Art Copernicus Celestial Spheres is so precise, the mechanism only requires a correction of one day every 8,000 years.

GRAHAM GEO.GRAHAM ORRERY TOURBILLON

Presented to Charles Boyle, fourth Earl of Orrery, the namesake came to represent a mechanical model of the solar system that displays the relative positions of the planets and, optionally, moons. It is here that the Graham Geo.Graham Orrery Tourbillon takes its muse (and name) with a planetarium style display with the Sun, Earth, Moon, and Mars.

Quite obviously, the largest celestial body in the solar system is analogous to the largest feature on the dial of the watch. In this case, the sun is represented in baroque style as a tourbillon with dual phoenix heads. Relative movements of the Earth are represented by Kingman Turquoise, while the Moon and Mars are represented by meteorites originating from those bodies). Track lines depict the elliptical orbit of Mars relative to Earth and the Sun; and since the Earth itself makes a 12-month orbit around the sun, its orbital path displays a Gregorian and Zodiac calendar as well. Additionally, there's a 100-year indicator that runs on the reverse side of the movement visible through its case back that tracks the current year.

It is interesting to note that George Graham is a pioneer in the field of precision horology, assisting peers like John Harrison in the industry's quest to find longitude. Additionally, though the original deadbeat escapement was invented by Richard Towneley in 1675 for regulator clocks at the Greenwich Observatory; it was popularised by Graham decades later (more on navigation and deadbeat seconds in a while).





JACOB & CO. ASTRONOMIA SKY

So far, the astronomical watches featured are feats of miniaturisation; being effectively tiny versions of clock-based astronomical displays. This is very worthy as such displays are difficult to use properly in wristwatch form, but the Jacob & Co. Astronomia Sky is an entirely different sort of timepiece. A kinetic sculpture on the wrist, the Astronomia Sky is not intended to be an accurate representation of astronomical phenomenon. Instead, it presents celestial objects through an unprecedented four-armed system – a three-dimensional display of time and astronomical indications.

The brainchild of complications specialists Ateliers7h38, the Astronomia Sky delivers time in not just the expected hours and minutes but also through a brilliant cerulean titanium dial with constellations and stars in 18K gold. This dial makes one rotation a year, that is to say, it is sidereal time, in contrast to the easier to understand, but not exactly precise, standard method of telling time by taking a day and dividing it into 24 hour intervals (which just happens to be four minutes longer than a Sidereal day).

Over the blue dial is a gilt-edged oval shape that traverses the constellations and stars, showing the portion of the sky visible from the Northern Hemisphere at that point in time. On the edge of the blue dial is a month indicator for the perpetual calendar.

It is obvious that each arm carries some sort of stylised display – among them, the most recognisable elements would be the dial with hour and minute display, a running seconds indicator in a form akin to the legs of an Apollo Lunar module, a faceted orange sapphire (which threw me off the first time I saw it since I assumed it was the sun) and finally, the distinctive double-axis tourbillon. The four-armed system itself completes a rotation every 20 minutes.

Earlier in the article, we discussed geocentrism versus heliocentrism, and the way the Astronomia Sky is set up, it seems the sun is rotating around the Earth, which is the central lacquered titanium geo-globe that doubles as the day/night indicator with one complete rotation every 24 hours. Thankfully, the faceted orange sapphire isn't intended to represent a heavenly body at all. If you recall, the previous Astronomia Tourbillon had a spherical faceted diamond in place of the sapphire seen here. It was meant to represent the moon in that piece, but since its rotation doesn't simulate any celestial object, it is really more of an artistic element. Meanwhile, what appears to be a double-axis tourbillon is actually a triple axis tourbillon, given that it actually rotates at the central point of the cross-arms as well. At the tip, the tourbillon rotates on its inner axis once per 60 seconds and on the outer periphery, once per five minutes.

IWC PORTUGUESE SIDÉRALE SCAFUSIA

Considered the most expensive watch in the IWC collection, the US\$850,000 Portuguese Sidérale Scafusia was developed with the help of Chronode's Jean-Francois Mojon. Sidereal time which tracks time based on our rotation relative to fixed stars other than the Sun, takes the place of prominence at 12 o'clock on the dial. Here, the Sidérale Scafusia is precise to within 11.5 seconds of deviation a year, but what is really intriguing is how the constant-force mechanism is implemented within the tourbillon. First, the tourbillon seconds ticks in one second "deadbeat" increments, but once half of the 90-hour power reserve has been depleted, the constant-force mechanism (visible under the escape wheel) takes over to deliver consistent torque to the tourbillon carriage. This saves energy by disengaging the one-second increments and running the sweep seconds you might expect of a traditional mechanical watch.



GRAFF DIAMONDS GYROGRAFF

Where the jeweller Jacob & Co. indulged in interpretative celestial art, competitor Graff takes its bejewelled concept and executes it with arguably greater dramatic effect – a literal reproduction of the moon and its cratered surfaces crafted from white gold, serving as a spherical moon phase indicator with a “hood” serving as the Earth’s shadow upon the lunar surface – what theatricality! We can actually see the Earth’s shadow on the moon on occasion, which are called lunar eclipses, and this representation by Graff is a reminder of this fact. Lunar eclipses are relatively common, happening at least twice a year and visible from anywhere on Earth.



Historically, when mechanical clocks were in their infancy, they served alongside sundials, highlighting the discrepancy between apparent solar time and mean solar time

BREGUET MARINE ÉQUATION MARCHANTE 5887

The Breguet Marine Équation Marchante presents the business of reckoning time with gravitas by featuring three useful high complications in tandem – equation of time, perpetual calendar, and tourbillon; that said, given the wealth of coverage on perpetual calendars and the tourbillon, we elect to discuss the equation of time.

Where the *Astronomia Sky* includes sidereal timekeeping, the Équation Marchante doubles down on the Sun with an equation of time complication, developed to resolve the discrepancy between two kinds of solar time – apparent solar time versus mean solar time.

Historically speaking, when mechanical clocks were still in their infancy, they served alongside sundials, and while the discrepancy was not that important for civilians, the difference became an issue for astronomers. Here, the Équation Marchante expresses this “equation” through an additional minute hand adorned with a faceted golden sun. A rare complication, most traditional equation of time displays use an arc graduated from -16 to +14 minutes, obliging its owner to engage in a bout of mental sums to work out the time. The new the Équation Marchante is so named because it displays a “running equation”, saving you the inconvenience of manual arithmetic. It is made possible with a differential gear linking two rotation sources operating entirely independently: the rotation of civil minutes and the rotation controlled by the lever in contact with the equation of time figure-of-eight cam (visible at five o'clock), which mechanically reproduces the Sun's successive positions (or analemma curve) throughout the year.



Time of meridian passage indicates the moment a heavenly body crosses the observer's celestial meridian



PATEK PHILIPPE SKY MOON TOURBILLON 6002G

Patek Philippe's Sky Moon Tourbillon is especially revered because it continues to indulge humanity's fascination of the skies; this is a collector-favourite and puts us in mind of the maison's Packard pocket watch in 1927. Home to 12 complications on front and back dials, the 6002G is a highly sculpted version of the Ref. 5002 introduced in 2001. Returning on the front dial are the retrograde date, perpetual calendar display (including not just moon phases but angular motion of the moon), and of course, regular time display. On the reverse, sidereal time, time of meridian passage of Sirius and the moon, resting on a bed of twilight blue simulating the sky with gold flecks indicating the stars. Beneath its beautiful surface is a superlative cathedral gong minute repeater and one-minute tourbillon.

If "time of meridian passage" sounds unfamiliar, it is because we have not covered a watch with this complication here – it indicates the time at which a heavenly body crosses the observer's celestial meridian, in this instance, Sirius, since it is the brightest star in the night sky. The Sky Moon Tourbillon is essentially a miniaturised Star Calibre with complications useful to astronomers and the sort of tool used by ancient celestial navigators before Harrison's chronometer.





BOVET RÉCITAL 20 ASTÉRIUM

Taking centre stage on the front dial of the Bovet Récital 20 Astérium is the large translucent blue sapphire dome with a laser-engraved map of the constellations enhanced with Super-LumiNova; floating above that is the hour hand designed to show three functions simultaneously: time display, north orientation for map reading, and the elliptical perspective of the night sky. On the left of the star map is a hemispheric high-precision moon phase with equation of time indicator, requiring mental arithmetic to compute. On the right sits the double hemispheric sub-dial showing power reserve on a 10-day arc with retrograde minutes indicated on the periphery.

On the reverse, the quadrants of the sidereal year track the orbital period of the Earth around the Sun for a period of 365.25 days or 365 days, six hours, nine minutes, and 9.77 seconds as opposed to the standard 365 day Gregorian calendar; a central hand indicates months and dates (graduated on the case back bezel) and the zodiac signs that they embody as well as indications for seasons, solstices, and equinoxes.

CARTIER ROTONDE DE CARTIER ASTRORÉGULATEUR

Barring 15th century pocket chronometers, high-precision watches don't typically come in 50mm case dimensions, but the Rondo de Cartier Astrorégulateur does so in fine watchmaking form through the use of lightweight niobium-titanium, making the watch weigh a mere 55g.

Conceived by Carole Forestier- Kasapi and team, the face of the Astrorégulateur features a prominent rotor-mounted balance and escapement – think of it as a position correcting tourbillon, automatically reverting to an upright position when the watch is vertical thanks to the rotor with affixed balance. In more familiar terms, it is like a gravity-compensating tourbillon, but instead of a constantly rotating balance wheel inside the tourbillon cage, the escapement of the Astrorégulateur remains in the same vertical state at all times, thanks to the centre of gravity provided by the winding rotor. This means that the balance need only be regulated for a single position, unlike the tourbillon. In this way, Cartier succeeds in turning gravity from foe to friend, illustrating that Earth's gravity makes our relative time possible. It is a complex idea given beautiful kinetic form here.

Another point of intrigue is the constantly rotating seconds scale on the rotor – a pair of differentials ensures that the seconds hand is constantly adjusted to keep relative position for the user to read seconds as he would a static dial.



JAEGER-LECOULTRE GEOPHYSIC TRUE SECOND

True Seconds or deadbeat seconds are a horological development credited to the aforementioned British horologists Richard Towneley and George Graham, which was a consequence of the growing need for precision. The Geophysic True Second is itself an evolutionary by-product of ever-increasing precise measurements conceived from the muse of the original namesake. This chronometer was intended for scientists of the International Geophysical Year expeditions of 1957 and 1958. One of the most widely reported consequences of this scientific event was the launch of the Sputnik 1 by the USSR. On 4 October 1957 – you might be reading this on the anniversary of this grand occasion – Sputnik 1 became humankind's first artificial satellite to successfully enter a stable orbit of the Earth. The new Geophysic True Second with Calibre 770 exhibits two noteworthy functions – deadbeat seconds via extra gearing for the high-precision second-to-second tick and an independently adjustable hour hand for frequent fliers.



AUDEMARS PIGUET ROYAL OAK PERPETUAL CALENDAR

Finally, there's the good old Perpetual Calendar. Not as flashy as most of the other watches in this feature but with the perpetual calendar, all the "sexiness" lies under the dial, residing in the internal "brain" of the timepiece. This "brain" effectively tracks the movement of the Earth as it orbits the Sun, taking into account the better part of said orbit's and rotation's eccentricities. This watch illustrates an important point about calendar watches: every single one tracks celestial time because as Earth's orbit advances, so too do the days. In fact, every watch tracks the rotation of the Earth on its own axis, a fact that's worth remembering every time you look at your watch.

Executed in black ceramic (a production process which takes five times as long than steel), the new Audemars Piguet Royal Oak Perpetual Calendar Ref. 26579CE in black ceramic uses a Calibre 5134 movement, which itself is based on the extra-thin Calibre 2120/2121 found in the original Royal Oak of 1972. More importantly, this model differs from another Royal Oak perpetual calendar from 30 years ago thanks to the addition of a 52-week indicator. Furthermore, the black ceramic Audemars Piguet Royal Oak Perpetual Calendar gets an embellished photorealistic rendering of the moon, which makes frequent checks of its phases all the more seductive. 🌙



SHOOT FOR THE MOON

Although lacking in terms of practical benefits, the moon phase is perhaps the most sentimental complication one can find in a mechanical wristwatch

WORDS **RUCKDEE CHOTJINDA**



There was a time, not longer than a decade ago, when many watch buyers dismissed the moon phase complication as a whimsical feature of no real-world use or value. For a case in point, look no further than IWC, which until recently did not feature the moon phase complication in any model that did not also include a perpetual calendar. Tool watches form the core of IWC, and all brands with a strong affinity for so-called useful functions (Rolex and Breitling come to mind) never really explored the moon phase tracker.

This situation has changed dramatically since that self-serious time, with more and more people embracing the moon phase display, even if they do so for purely aesthetic reasons. Indeed, no less than Rolex has revised its opinion of the complication, as we have seen at BaselWorld this year. More on that in a moment though...

Aside from Rolex, an increasing number of brands do offer watches with this complication for men and ladies alike. In fact, it has come to the point where a collection should include a moon phase watch if possible, for the sake of rounding things off nicely.



CELESTIAL DANCE

This article is dedicated to the appreciation of moon phase watches and the variety in interpretations. Nevertheless, it is always best to begin with an understanding of the astronomy and history behind it all.

Contrary to popular misconception, the darkened part of the Moon is not caused by the shadow of the Earth – that would be a lunar eclipse, which is an unusual and totally different phenomenon. The Moon is the Earth's only natural satellite, orbiting our planet in approximately 29.5 Earth days in the same anti-clockwise manner that the Earth orbits the Sun. Therefore, during this period, the Moon can either be between the Earth and the Sun, directly behind the Earth relative to the Sun, or somewhere in between.

As the planets go through their celestial choreography, the Moon catches light from the Sun at a different angle, relative to the Earth, resulting in its varying degree of reflection from total darkness (new moon on day zero when the Moon is between the Earth and the Sun) to full reflection (full moon on day 14 or 15 when the Earth is between the Moon and the Sun). This showcases the odd lunar day, which is roughly 15 Earth days long, and means that there is really no such thing as the dark side of the Moon, no matter what Pink Floyd fans might say.

Not only does the Moon's position in relation to the Earth and the Sun determine the intensity in which the landscape is illuminated at night, its gravitational tug affects the tides as well. The Moon's elliptical orbit constantly changes the distance of its centre of gravity to that of the Earth; when it is nearer, the Moon's gravitational pull is stronger, leading to a higher tidal range, sort of. The effect is more pronounced with the help of the Sun's gravitational pull from behind the Moon during a new moon and from the opposite side during a full moon. To a certain extent, in the absence of a proper tidal chart, the knowledge of the phases of the Moon can come in handy for seafarers when navigating shallower routes.

Additionally, the lunar cycles, like the months, help humans track the passage of time. After all, there are usually 12 full moons in one year, with the occasional 13th one. They indicate the seasons as well, which in turn linked the cycles to agricultural activities such as the harvest (i.e. the harvest moon marks the full moon nearest to the autumnal equinox), as well as to the observance of key religious events such as Easter (i.e. the Sunday after the first full moon following the spring equinox).

It thus became the responsibility of early clockmakers to provide this information on what's called the synodic month, in

addition to the time or other calendar trivialities. A common solution was to depict the different phases of the Moon as seen on any certain day during a lunar cycle with a circular disc and a cover. Generally rimmed with 59 teeth, this disc would bear the graphical rendering of two moons on a background of dark blue for the night sky.

Only one of the two moons will be visible at any given time through the half circular opening on the dial. With each passing day, the disc would be advanced by one notch, bringing the moon from the left to the centre then to the right, corresponding to the illuminated shape of the moon on a particular day. Upon completion of the 29.5-day cycle, the waning moon eventually exits from view on the right, allowing the other moon to rise from the left on the next day.

Nevertheless, there is a catch or a small flaw in this otherwise perfect arrangement. Each lunar cycle is not exactly 29.5 days or 29 days and 12 hours – it is in fact 29 days, 12 hours, 44 minutes and 2.8 seconds. For this reason, regular moon phase watches will show a deviation of one day if kept running continuously for two years, seven months and 22 days. It is not a big deal as only one small adjustment is required; also, most watches are allowed to wound down in weeks' or months' time anyway, and their moon phase indicator is reset when the watch is back in use again.

You may be interested to know that certain moon phase watches are built with a more elaborate indication system where the disc is rimmed with 135 teeth. Here, the cyclical deviation decreases from 2,642.8 seconds to only 57.2 seconds, in which case the accumulated deviation of one day will not be met until 122 years and 44 days from when the moon phase is first set. Some watches are engineered in such a way that they can claim even longer precision spanning over a millennium – a commendable technical feat, despite the fact that no watch should go over a decade without servicing, and that no one currently alive will be around to see the difference.

At the risk of sounding even less enthusiastic, the moon phase function on a watch today serves more decorative and aesthetic purposes. Mankind has evolved culturally, socially, and scientifically to the point where the Moon and its cycles have become irrelevant to the way we live.

Still, the moon phase remains a complication on watches as a product of legacy – much like mechanical watchmaking itself when you think about it. We often find it on calendar watches, the way it was incorporated into pocket watches of yore. Moon phase watches now come in all stylistic interpretations for gentlemen and ladies, with and without additional complications, as shown on the following pages.





Cartier Drive de Cartier Moon Phases



Omega Speedmaster Moonphase

MOON PHASE ESSENTIALS

If you only want the moon phase and nothing else, check out Cartier Drive de Cartier Moon Phases – one of the watches introduced by the maison at SIHH this year. Presented as a shaped and elegant watch for men in stainless steel or pink gold, Drive de Cartier encompasses the addition of the moon phase indicator above the six o'clock position, bringing the sophistication level of the timepiece up two notches without disrupting the dial symmetry like the Large Date, Retrograde Second Time Zone and Day/Night Indicator model or costing a fortune like the Flying Tourbillon model. The moon phase deviation on this 40mm x 41mm watch is one day in 125 years.

Rolex Cellini Moonphase represents a much talked-about star at (and immediately after) BaselWorld 2017. Offered in a 39mm Everose gold case, the main attraction on its white lacquer dial is the blue enamelled disc for a rather unusual moon phase display. The meteorite appliqué meets with the triangular marker at the top during the full moon. Conversely, the presence of the silver ring indicates the new moon. It takes 122 years until the accumulation of a one-day deviation. A long, blue hand points to the date on the peripheral, adding to the practicality of this self-winding watch on a tobacco leather strap.

For those in favour of an off-centred design, the Jaquet Droz Grande Seconde Moon is hard to resist. The hour and the minute hands are pushed up, making space for a large display of the seconds, the date, and of course, a moon in solid gold. In addition to this red gold version with the ivory dial, the watch is produced in stainless steel with either silver or onyx dials. Similar to the Rolex and other astronomical moon phases, the lunar indication on this 43mm watch is accurate to 122 years (and 46 days, to quote the exact specifications).

Some moon phase timepieces deliver even more – and the Omega Speedmaster Moonphase comes quickly to mind. Thanks to the use of an anti-magnetic chronograph movement as its base, this 44.25mm watch affords the possibility of timing an event lasting up to 12 hours with the combined hour and minute totalisers at three o'clock. Meanwhile, the black-and-white moon on the starry background is rendered in a photo-realistic fashion, save for the exaggerated footprint of Neil Armstrong. The gear train of this moon phase is developed to be accurate to only 10 years, but that is already almost four times more accurate than conventional moon phase watches.

Jaeger-LeCoultre Reverso Tribute Moon reflects an easy choice if you are in the market for a watch that indicates time in two zones, or on a rectangular display. Like a few other Reverso watches, this one features one dial on each side of the case. Only the front, silver-grained dial includes the moon phase window in the embrace of a date ring. The corresponding location on the rear dial houses a graphical day/night indicator, linked to the independent hour hand on a dark blue canvas. The Reverso Tribute Moon, produced only in stainless steel, measures a wearable 49.4mm x 29.9mm.

Lastly, it is impossible to finish this section without highlighting a moon phase watch with a perpetual calendar. The perfect candidate seems to be Chopard L.U.C Lunar One, which exemplifies what L.U.C is all about. Although first unveiled in 2005, the 43mm self-winding, micro-rotor model is refreshed this year with a 100-piece limited edition in platinum. The galvanic blue dial with a sunray pattern, emanating from just above the big date windows, comprises the most distinctive feature of the edition. Its moon indication, peering through a circular opening on the night sky disc, is designed to be orbital and accurate to 122 years.

Jaquet Droz Grande Seconde Moon



*There is really no such thing as the dark side of the moon,
no matter what Pink Floyd fans might say*



Sarpaneva Korona K3
Northern Stars Guilloché

EXTRA MILE

Some moon phase watches go the extra mile, either in terms of engineering, arts or a little bit of both. Take the Andreas Strehler Lune Exacte as an example. This watch pays special attention to how the moon phase is read off a watch dial. In addition to a regular depiction of the moon, Andreas Strehler presents a circular moon vernier scale at the six o'clock position for the most precise reading of the moon age in days and hours. Available in either red gold or platinum, the manual-winding Lune Exacte maintains an unbeatable moon phase precision of two million years. Yes, two million years – that is not a typo, and yes, the watch works (from all accounts). By that time, the Moon will be 7,600km further away from us than it is today, and our day will be about 40 seconds shorter than it is now.

De Bethune DB25L Milky Way takes on a totally different approach. Apart from the micro laser gilded Milky Way across the blued titanium dial, the six-day, manual-winding watch is quite sparse. Its main attraction includes a three-dimensional moon phase – a De Bethune signature – below the 12 o'clock position. The sphere, half of which is blued steel while the other half is platinum, offers good precision – the DB25L Milky Way has an astronomical moon that will be accurate to 122 years. Sixty-six baguette-cut diamonds line the case band of this 44.6mm platinum watch.

If art moves you, we have two more timepieces to showcase. The Glashütte Original Senator Moon Phase Skeletonized Edition in 42mm white gold makes a striking impression with its skeletonised movement. Legibility is thankfully preserved with the use of blued hands for contrast, and an open dial where the flange is retained, complete with hour markers and minute track. Power reserve is on the rather short side at 40 hours, which is not unusual for the older calibres from this brand. In any case, a long running time is not the reason you buy such a timepiece. The appeal lies in the Glashütte craftsmanship, and of course, that moon phase between 10 and 11 o'clock. For another example of Glashütte workmanship, and a unique approach to tracking the moon phase mechanically, see the cover story on page 70.

For unrestrained (and more contemporary) execution, peruse the offerings from Stepan Sarpaneva, a Finnish watchmaker with strong technical and design skills. He is also well known for stylising the moon after his own face. That is true for the new version of Sarpaneva Korona K3 Northern Stars Guilloché in 42mm stainless steel with a green guilloché dial crafted by Comblémine Cadran – a specialised workshop owned by Kari Voutilainen. The movement is a modified self-winding Soprod A10 with the setting of the moon phase through the crown. A light brown leather strap completes this rather unusual and playful setup.



Glashütte Original Senator Moon Phase Skeletonized Edition

FEATURES

FEMININE ELEGANCE

The watch world is never exclusive to gentlemen, especially not in the present day. Happily, we live in an age when the female clientèle forms a sizable part of the watch buying community. It is certainly not proper for ladies to depend on men's watches for the complications. After all, ladies deserve to have watches that suit them in terms of not only size but also grace. The Blancpain Villeret Date Moonphase is a quintessential specimen in this regard. Quite dainty with a width of only 29.20mm, this stainless steel timepiece is delivered with five leather straps in different colours to match various occasions and outfits.

Choosing instead to be all white for the strap and the dial, the A. Lange & Söhne Little Lange 1 Moon Phase manual-winding watch retains vibrancy with the use of pink gold for its 36mm case, hands, and markers. The Little Lange 1 Moon Phase may carry a name that sounds small, but that is not to say that its engineering is inferior in any way. The movement is exquisitely finished, as one would expect of A. Lange & Söhne, and the moon phase indication is accurate to 122.6 years (this is actually the one new model for 2017 that we couldn't fit into our cover story – Ed).



A. Lange & Söhne Little Lange 1 Moon Phase
(above and below, in close-up)





Bulgari Lucea Moon Phases
in white gold and pink gold

If diamonds are required, one of these three watches will do the job just fine. The Vacheron Constantin Traditionnelle Moon Phase and Power Reserve, in 36mm white gold or pink gold, exudes delightful sweetness with the use of a mother-of-pearl dial. Its hand-winding movement is both beautifully finished and capable, ensuring accuracy of the moon phase at nine o'clock for 122 years. Eighty round-cut diamonds adorn the bezel and the lugs, while one more on the crown is provided for good measure. The overall appearance radiates classicism and sophistication but not without distinctive flair and contemporary freshness.

The Lucea collection of Bulgari, which was purpose-designed for women, looks good with or without complications such as the tourbillon and the moon phase indication. The latter is simply referred to as the Bulgari Lucea Moon Phases. This 36mm self-winding watch invariably proffers a large moon phase window that consumes the upper half of the mother-of-pearl dial, save for where the diamond markers are located. While the rose gold and the white gold versions sport diamonds on the bezel and the lugs, the stainless steel model features a touch of rose gold instead of diamonds.

For the full-blown diamond effect, the Piaget Limelight Stella does not fail to inspire awe. This exceptional creation in white gold is loaded with diamonds: 89 baguette-cut and 264 brilliant-cut diamonds on the bracelet, crown, and dial, plus 224 baguette-cut diamonds on the bracelet. That is 42.15 carats altogether. A self-winding movement at the heart of this timepiece has been developed and created by the two Piaget workshops in La Côte-aux-Fées and Geneva. The 135-tooth moon phase wheel guarantees accuracy to the point where the watch will require an adjustment of only one day in 122 years.



Piaget Limelight Stella



Citizen Campanola
Amamitsuhoishi BU0020-03A



Left: Samsung Gear S3 Classic
Right: Casio G-Shock Gulfmaster GN-1000GB-1A


ELECTRONIC ASSISTANCE

Everyone knows Citizen but few are aware of its Campanola range of higher-end, functional luxury watches. From the beginning, many models in this range were designed with complex indications on the dial, usually having to do with calendar indications and the skies. The solar-powered, perpetual calendar models Campanola Amamitsuohoshi BU0020-03A (black dial) and Kokiake BU0020-03B (red dial) both feature a small aperture at six o'clock for the tracking the phases of the Moon. Unfortunately, little details are available in English, so we are unable to share more on interesting aspects such as the dial crafting techniques used.

The Gulfmaster line of Casio G-Shock watches is designed for professionals and enthusiasts with maritime interests. Equipped with multiple sensors, the timepieces offer such tools as digital compass and thermometer, as well as tidal information like tide levels at different times of the day (in the chosen locality, of course) and the phase or age of the Moon. Shown is the Casio G-Shock Gulfmaster GN-1000GB-1A model whose beige gold bezel imparts a vintage feel like that of a porthole of a ship after years of exposure to the elements. That's the benefit of the G-Shock design, after all. It is

included in this article because it has a digital moon phase indicator at the four o'clock position.

Since we are already in the quartz or digital territory, why not go all the way to a smartwatch? Samsung Gear S3 Classic is the candidate for this moon phase article. With an almost minimalistic exterior design, the watch case has two buttons on the side and a rotating bezel which is used to handle calls, volume, and scrolling through messages and applications. Apart from the standard connected functionalities, the watch gives the user an array of dial choices – one of them is a full calendar with moon phase behind simulated analogue hands. As far as we can tell, it is one of the few examples of the moon phase complication being integrated into a smartwatch, making the Gear S3 Classic a potentially significant watch.

As mentioned at the beginning of this article, the moon phase complication may not be useful in everyday life, but it is a charming one to have. Moon phase watches come in all shapes, sizes, and prices. It is not too late (it is arguably never too late – Ed) to start looking for one that suits you, and perhaps you too can enjoy owning a slice of the heavens. 



The Cartier Rotonde De Cartier Mysterious Hour Skeleton uses sapphire crystal discs to drive the hours and minutes

TIME DILATION

As the year comes to an end and watchmaking looks to be weathering the fiercest storm it has faced in recent memory, we look back on a few of the key advances in contemporary watchmaking

WORDS **ASHOK SOMAN**



Fluid injection at HYT, which is the first watchmaker to introduce such an eccentric technique in timekeeping

Every watch you see puts a particular face on time, hoping that one of these many faces will appeal to you. You'll look at your watch many times in the course of a day and you won't even recall that you are looking at your watch – although the makers may be invested in reminding you who made the watch. This isn't merely the dial, of course, but the entire package, including things you can't see. The wealth of options out there obscures certain commonalities, namely the spirit of innovation and the technology that drives the watches. It is precisely in the sort of technology employed that you will find a clue to what divides people who buy watches – quartz versus mechanical; the importance of who made the watch versus its practical functions; the virtues of handcraftsmanship versus high-tech wizardry. People no doubt cross this divide all the time, but one sort of approach probably moves you more than the other.

Paradoxically though, many quartz watches today represent a less interesting spin on time than even their most elementary mechanical competition. This is primarily because cutting-edge technology is expensive and expensive watches tend to be mechanical – quartz watches could only be cutting edge if they had a matching price tag. Of course, there are well-known exceptions to

this, if you just recall the examples of Seiko, Citizen, and Casio, but in general, no one invests significantly in making superior quartz watches (more on this in a bit).

We remain tuned in to the ongoing debates swirling around smartwatches, but these are clearly not dominating wrists everywhere, at least for now. Again, as reported in the smartwatch story last issue, there is no reason you can't enjoy all sorts of watches, but some people are only happy when one group or another is winning (or losing, it happens).

Accurate timekeeping is indispensable in our connected world, from a practical perspective as well as a purely scientific angle. Thus, it is hard to imagine a world where accuracy was only for the wealthy because the more accurate a watch, the more expensive. It was like having bragging rights, with brands helpfully publicising how many chronometry prizes their tickers had earned from the top observatories. Prior to the 1970s, the science was strong with traditional watchmaking. Unfortunately, science and economies of scale finally threatened the mechanical wristwatch with extinction as the demand for accuracy raced past what even the best mechanical movement could manage.



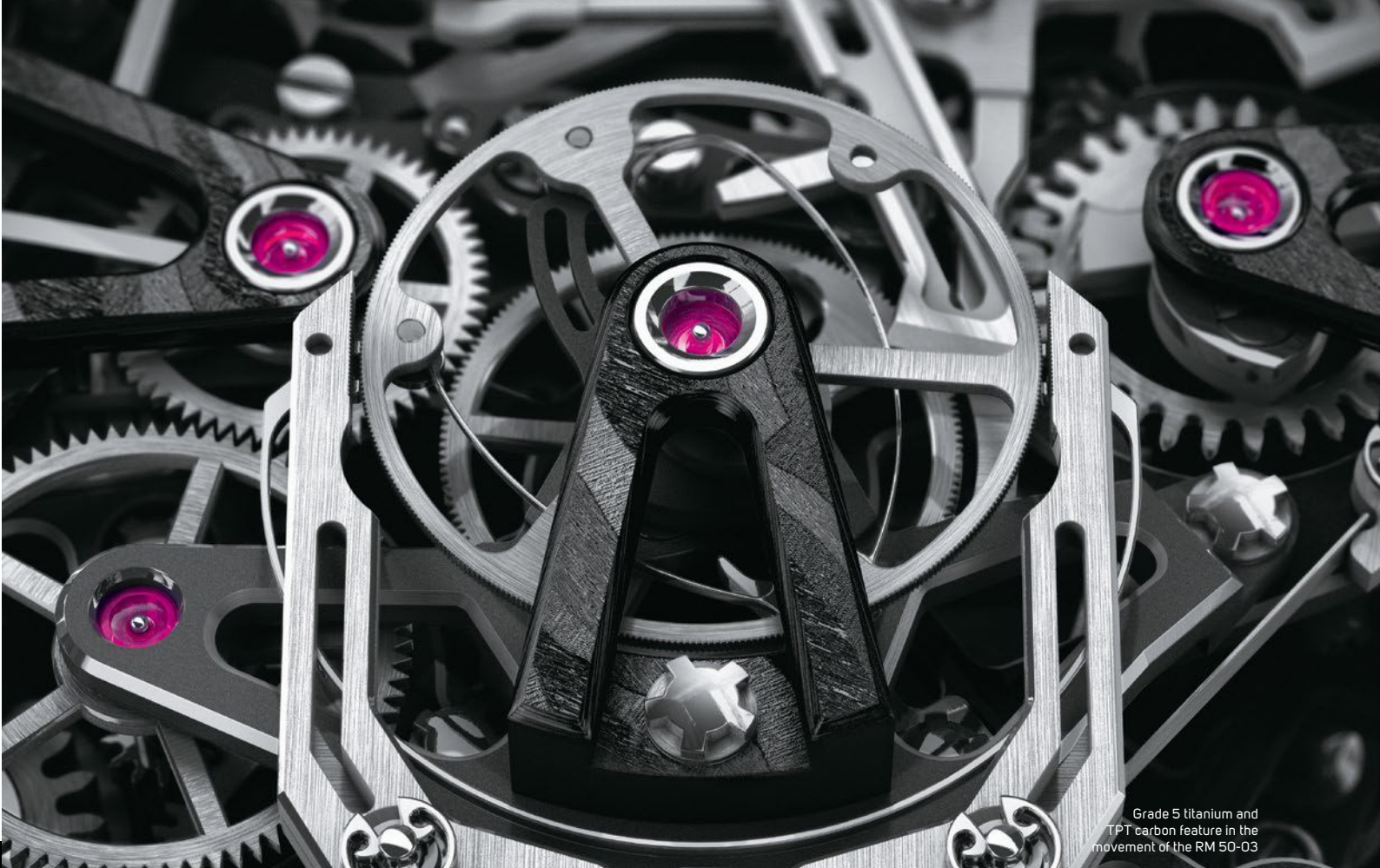
Zenith Defy El Primero 21 boasts two escapements – one for regular timekeeping and the other for the chronograph

Time is indeed essential and watchmaking responded by using the best available technology to put wristwatches on the wrists of as many people in the world as possible. This is a development that is too often taken for granted because, arguably, it made the world a better place. Even better, quartz technology was incorporated into precision instruments that advanced the micromechanical engineering that today gives us many of the advances we report on here. With all this high technology hiding in plain sight in your own watch (if it was made from 1995 onwards), it begs the question of whether traditional Swiss watchmaking is really traditional at all. Additionally, there is also a fear that as more contemporary technology invades the manufactures of Switzerland, traditional know-how may be under threat.

As early as a couple of years ago, watchmaking commentators at Hodinkee and WatchesbySJX questioned whether new materials and manufacturing techniques enriched the world of mechanical watchmaking or threatened the romantic ideal of watchmakers labouring tirelessly over tricky and demanding mechanical movements and parts. For the purposes of this article, we set aside (mostly) such philosophical musings and focus on whether watchmakers are ready to deliver watches that can stand the test of time. In other words, we are obsessing yet again on the idea of timekeeping instruments that will be passed down from one generation to the next. The fact that this idea is best articulated by Patek Philippe is so much the better because this stalwart of fine Geneva watchmaking wholeheartedly embraces contemporary technology and is widely thought of as emblematic of the highest standards of haute horlogerie.



Richard Mille RM 50-03, possibly the lightest chronograph in the world



Grade 5 titanium and TPT carbon feature in the movement of the RM 50-03

MATERIAL BREAKTHROUGHS

Most readers will have heard of graphene and its near-mythical properties – the Breakthrough Starshot spacecraft may use a composite of this two-dimensional material for its lightsail – and it has indeed found its way into watchmaking just this year with the Richard Mille RM 50-03. In 2017 though, the real star of the material revolution convulsing through watchmaking is silicon, which began life in fine watchmaking with the likes of Breguet, Ulysse Nardin, and Patek Philippe but has now been applied to everyman brands like Tissot, as reported in Issue 45, and Mido (see next issue!).

At BaselWorld, we overheard journalists, distributors and retailers complaining loudly that this move makes silicon about as exclusive as sand. According to these critics, what would Patek Philippe and Breguet customers say about silicon now being shared with even the accessible luxury segment? Well, the Swatch Group, in particular, has already articulated its position as far as this is concerned, with Marc Hayek saying this innovation would be deployed as far and wide as possible to maximise its benefit for everyone.

There is, of course, nothing particularly special about silicon, being the eighth most common element in the universe. In fact, it is used in all manner of industries and has been used in steel refining and aluminium casting for some time.

The Invar alloy (see below) Nivarox uses for its normal hairsprings is a little more mysterious and exotic but is widely deployed in watches at every price level. We have yet to hear Cartier collectors complain that their watches share the same hairsprings as Baume & Mercier... On that note, Cartier too has experimental escapement developments – carbon crystal – that would be impossible without new technological means in watchmaking. Some

years before that, Jaeger-LeCoultre used something similar to create a watch that needed no lubrication. More on that below, but we would also like to address carbon more directly here.

Carbon fibre was first used as a dial material before migrating outside to the case and then inside, beneath the dial, in the movement proper. Industry experts tell us carbon is proven to be suited for moving parts now, just as titanium and aluminium are. Perhaps this goes without saying but carbon fibre parts need no fine-tuning by hand – in fact, such would be practically impossible. Roger Dubuis has managed to get the Poinçon de Genève for its Excalibur Carbon Spider, so at least one brand has shown that contemporary watchmaking manufacturing can achieve the lofty standards of haute horlogerie finishing, by hand or otherwise (see below).

For completeness here, we must note that the use of carbon fibre, titanium, and aluminium in the movement has led to remarkable advantages that one might not even notice. The reason is down to weight, or rather the lack thereof. Reducing weight in the moving parts, such as the balance wheel where titanium is staking an ever stronger presence, means there is less inertia, which in turn results in an improvement of the timekeeping rate by directly enhancing isochronous oscillations (in the specific example of exotic materials in the escapement).

Rolex, for example, uses nickel phosphorous for its escape wheel and pallet fork, thus allowing the entire system to be lighter and more efficient. As covered in Issue 42, Rolex says this development means the Chronergy escapement has an improved efficiency over conventional designs and materials by an estimated 50 per cent. Watchmaking arrives late to the game here but its embrace of graphene shows that it can boldly look to the future – for practical as well as aesthetic benefits.



Omega Seamaster models displaying extreme anti-magnetic properties, up to 100,000 gauss



Breguet Classique Chronométrie 7727

MASTERING MAGNETISM

Magnetism has long been the foe of watchmakers everywhere but, prior to the second half of the 20th century, it wasn't a major threat. These days, with people carrying around the equivalent of at least one personal computer, the electromagnetic force may be a more serious threat than gravity to sensitive mechanical movements. In fact, watchmakers appear to be amply ready to face the contemporary age, with movements today including a host of innovations that might actually turn magnetism into a friend.

Marc Hayek, boss of Breguet and Blancpain, and Swatch Group board member, told us that Abraham-Louis Breguet himself might have opted to use an escapement based on magnetism as it solved many of the problems plaguing mechanical watchmaking. Of course, such means were not available to that legend of watchmaking but the idea is a sound one. Over at Breguet, Hayek has presided over the audacious and pioneering use of magnetic balance pivots in the Classique Chronométrie 7727, which allows the escapement to operate without being bedevilled by friction. Swatch Group managed this by manufacturing the vital parts of the escapement in silicon, thus making these impervious to the electromagnetic force's own negative effects on mechanical systems.

Other groups have options here too as virtually every maker of timepieces acknowledges that electromagnetic fields presents both a threat and an opportunity. TAG Heuer has its Pendulum system, which replaces the balance spring with what WatchAround called a "magnetic mosaic" in 2013. The idea of using magnetic attraction and repulsion to replace mechanical oscillation was also floated by Hayek in our conversation with him, so this idea will likely become reality at some point.

ALL-CAP PRODUCTION (PART I)

LIGA and DRIE. These all-cap acronyms represent just two of the newest techniques to have found a home in watchmaking. Without these, silicon components and the use of all manner of exotic composite materials would be nigh impossible.

These are only two contemporary manufacturing techniques, of course, but in their efficiency and near-incomprehensible power, they showcase one possible and very plausible future of watchmaking. To be clear, this future will take watchmaking down the same path as the rest of the world. The architecture of the mechanical movement won't change in principle, but the creation of the components will be far removed from the understanding of both watchmakers and customers.

When constructing parts out of silicon, it is useful to remember that the raw material arrives as a wafer, not a solid block nor a sheet that will be stamped and cut, nor nuggets of metal that will be melted down and shaped. The word "wafer" is purposeful and appropriate, hinting that components need to be cut with a certain degree of precision and delicacy. That's basically the much-abbreviated story of DRIE (dry reactive ion etching). LIGA (a German acronym for lithography, electroplating, and moulding) is entirely different but



The Rolex Pearlmaster hides a Syloxi hairspring in its movement



You can make out the silicon escape wheel in the Panerai Calibre P.3001/C, easily identified by its colour, but just out of sight here is the pallet fork, also in silicon

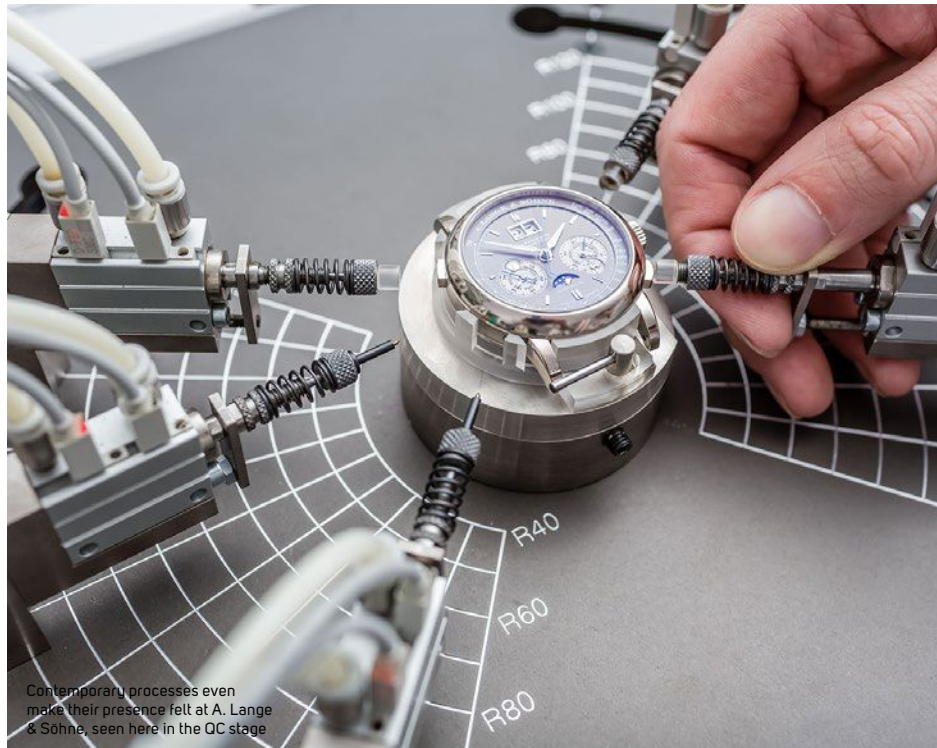
is also one of the key technologies that see engineers and machine operators taking the lead over watchmakers.

This story will take a little too long to get into but here's a quick stab at it. Silicon and carbon are the newest materials that are finding their way into watches at every level. Combined with new manufacturing methods, these materials make possible ever more precise components and, arguably, the best mechanical movements ever made. These manufacturing methods are not limited to silicon and carbon though because without LIGA the Rolex Chronergy system could not have been realised.

Nevertheless, there is an argument to be made here that humans working at digital control panels are not what customers of high-end watchmaking brands have in mind when they imagine humans working on handmade watches. Indeed, even we are surprised – still – by how high tech watch manufactures are today.

As more and more collectors from a variety of countries discover this, a new generation must decide if these innovations are worth their money. Bear in mind though, there is an important distinction to be made between this technology and such things as CAD, CAM, and CNC. Speaking of which...

With all this high technology hiding in plain sight in your own watch, it begs the question of whether traditional Swiss watchmaking is really traditional at all



ALL-CAP PRODUCTION (PART II)

It might be hard to imagine but as recently as the 1990s, blueprints were still being done by hand. Computer-aided design (CAD) changed all this, even as the Internet was coming of age, and it is present in every field of design engineering today. As far as watchmaking goes, contemporary movements are the result of CAD while older calibres such as the Valjoux 7750 were likely drawn up the old-fashioned way. This is not only a matter of efficiency over elegance though as with the aid of computers, it became possible to model the effects of various forces and to test tolerances. Obviously, this transformed prototyping by letting the designers and watchmakers know in advance whether their creations would work properly and they could account for risks in construction by building virtual models and tweaking the same.

With CAD, prototyping teams are now able to know how thick the brass and steel parts that go into movements need to be to work properly. Obviously, this tool can also handle the more “exotic” materials that we covered above, including that the normal

machining process for steel and brass won’t work for silicon.

However romanticised watchmaking might be, all those miniscule parts in a mechanical movement will only work if they conform to precise specifications – there is no question of watchmakers manually filling parts to make them fit, for example. Tourbillons with titanium parts need to emerge perfectly formed, as these cannot be reworked or fine-tuned.

Computer-controlled engineering or computer numerical control (CNC) takes this further by delivering the CAD directives directly to robotic tools, which then do the job precisely as tasked. The bridge between CAD and the CNC machines is computer-aided manufacturing software (CAM), which is perhaps the best acronym here. In the past, lathes were controlled by operator-driven cams and such machines are still present in many watch manufactures. If you have seen these in action, neither romance nor magic are present, so CNC mills were able to take their place without much brouhaha (or at least without protests from customers similar to what we see today with regards to silicon).



The silicon anchor and escape wheel of the Patek Philippe Pulsomax system are used in Ref. 5550P (above)



COMPLEXITY VS SIMPLICITY

Since the days of what's known as the "jewel inflation" period, watchmaking has tried to wow the world with the number of its bitsy teeny tiny parts it manages to squeeze into small cases. The idea goes like this: reveal just how many parts there are to every complication and use this information to present the reality of how complex mechanical watchmaking is. Grand old names such as Patek Philippe, Jaeger-LeCoultre, and A. Lange & Söhne are all practised in this art. Consequently, Patek Philippe annual calendars have more components than most perpetual calendars...even its own. To add a measure of confusion here, Patek Philippe is part of an exclusive club of brands making extensive use of silicon technology to bring a measure of simplicity to its watchmaking art. Briefly speaking, a silicon anchor and silicon escape wheel do not require pallet jewels, if used together. This obviously slashes the number of parts involved in that most vital of components, the escapement (see below).

Speaking of which, another group of watchmaking houses are deeply committed to streamlining processes and using simplicity to deliver better chronometric performance. Here we have Ulysse Nardin, Omega, Breitling, Richard Habring, and Andreas Strehler, among other notables. Rolex fits into this picture, with Calibre 4130 that replaced the El Primero-variant in the Cosmograph Daytona notably featuring less moving parts. Rolex itself says its engineers managed to reduce the number of components used here by 60 per cent – that means Calibre 4130 features fewer components than most other chronograph movements. TAG Heuer follows similarly here with its Calibre 02, which has 168 parts (minus the tourbillon component), meaning it is far below the standard 250 or so components used by the workhorse Calibre 7750. The logic here is not difficult to understand – the fewer moving parts in any given system, the more stable it is and the less prone to errors and breakdowns.



The Rolex chronograph Calibre 4130 features the Rolex Chronergy escapement



EXHIBITION CASE BACK

Be it ever so humble, the little sapphire crystal window on most higher-end mechanical watches is terrifically important. Its current dominant position in most brands – Rolex is the exception – began in the 1990s, when the mechanical watch made a comeback. In the absence of hard facts from that time, we surmise that brands must have responded to requests from the sales floor to put the mechanical movement front and centre. Of course, such is standard fare today – Rolex remains the exception – and any brand worth its watchmaking heritage plays along. Today, many brands have invested in precious in-house movements and not having exhibition case backs seems such a pity – again, Rolex is the exception.

Quite often, the same scratch-resistant anti-reflective crystal that shields the dial also covers the movement. Water resistance and other protection from the environment is, of course, not compromised in this effort. Unbelievably, there are no records of which brand started creating exhibition case backs as standard

fare, probably because such “exhibition” case backs were used as far back as the 19th century when sales people brought “display” watches to retailers. EuropaStar notes that synthetic sapphire was first used to protect the dial in the 1960s and we assume that case backs received the same some time after.

Today, synthetic sapphire has moved from the front and back of watches to the sides of the case, and then eventually to become the entire case! Once again, contemporary industrial technology allows something like synthetic sapphire to be moulded, so to speak, into all kinds of unbelievable shapes. One need only look to Bell & Ross, Richard Mille, and Hublot for the most obvious examples, although independents such as MB&F don’t shy away from experimenting, as seen in the HM6, among others.

On the other hand, Cartier, Blancpain, Jaeger-LeCoultre, Jaquet Droz, and even Vacheron Constantin and A. Lange & Söhne have shown that synthetic sapphire can work on the dial (to replace the same) and in movement components. Cartier’s mystery wristwatches are the most poetic examples of this development.

REDEFINING HANDMADE AND UNCONVENTIONAL DISPLAYS OF TIME

The quartz ascendancy did not immediately herald the end of the analogue display but there was a moment when it seemed that time might have outgrown its need for limbs. Given that the quartz age showed that watches didn't need a beating heart, this development should surprise exactly no one. Happily, quartz did not kill the mechanical watch nor the hands of time, but the watchmakers who persevered with mechanical watches found the fun in their trade by occasionally dumping those pesky hands.

Leading the way was the Opus series from Harry Winston, through Vianney Halter's Opus III, and Felix Baumgartner and Martin Frei's Opus V. This heralded a new category of watches sometimes called Unconventional Displays of Time. Obviously, the Urwerk duo is the current champion in this category but they are far from alone. Of the major league brands, A. Lange & Söhne owns this category with the Zeitwerk, which is a standard part of the collection. SevenFriday and a host of Kickstarter insurgents continue to prove

that this sort of creativity is not limited to the highest end of the watchmaking world.

Now, prices notwithstanding, this approach allows for brand new approaches to time display, as we see with the hydromechanical horology pushed by HYT. All HYT watches use traditional mechanical movements to derive a steady rate of time, and then use this rate in combination with a system of bellows to drive a liquid display of the passage of time. Needless to say, this is audacious but perhaps even more impressive than the exclusive technology making this happen is the necessity of hand-adjustment in assembling this sort of movement.

Basically, a person has to inject the two different coloured fluids into the capillaries of each movement. This is a drop-by-drop process in the end, with exacting focus needed to create a balance here. WatchAround reports that it takes three hours and 15 specific tools to fill the fluidic module of the H1 model and up to three times longer for the H3. It is certainly not what fits the traditional definition of handmade but perhaps we should update our definitions of the term.

HYT H0



ALTERNATIVE ESCAPEMENTS

In our own story on this subject, in Issue 42, we noted that the Swiss lever escapement is the undisputed champion of regulating organs but watchmakers continue to experiment with alternatives. The most successful and widely known of these is the Omega Co-Axial escapement, which began life as the George Daniels co-axial escapement. While it has not swept the lever escapement aside, it has proved that the venture into alternative hearts for the mechanical watch is not a vainglorious quest. Some consider special escapements to be selling points for major brands, just as Cartier showed with the LAB ID or TAG Heuer showcased in the Pendulum watch, both concept pieces. The facts seem to indicate that delivering a constant force will give us better watches, if we can come up with more robust and easy to produce solutions than remontoirs and the fusée-and-chain.



The Audemars Piguet Millenary Minute Repeater features the Audemars Piguet escapement

The signature double hairspring arrangement of the Audemars Piguet escapement



Parmigiani Fleurier's Genequand escapement may look electronic but it is purely mechanical

New spins on old techniques are present everywhere today, with the detent escapement adapted by both Audemars Piguet in the Audemars Piguet Escapement, and Urban Jürgensen thanks to Kari Voutilainen and Jean-François Mojon. Similarly, experiments are ongoing with Abraham-Louis Breguet's échappement naturel, not at the modern-day Breguet but at F.P. Journe and Laurent Ferrier. The independents have certainly made a name for themselves in the realm of escapements, mainly because they will never need to come up with a solution that can be applied to hundreds of thousands of watches. This exclusivity is precisely what their customers will appreciate.

On another level, the Co-Axial escapement joins the Ulysse Anchor Escapement, the Girard-Perregaux Constant Escapement, and Parmigiani Fleurier's so-called Genequand escapement in showing that these new techniques depend heavily on the material revolution slowly sweeping through the world of watches. As other observers have noted, the silicon variants at play today share the vibrational properties of quartz; the difference today is that watchmakers are looking at regulating the clockwork by purely kinetic means, eschewing the more efficient if inelegant lure of electricity. Here at WOW we think that the watchmakers want to see how closely a purely mechanical system can mimic the accuracy of quartz. Speaking of which...

DIGITAL TIME

Quartz is the unsung hero of watchmaking and most watchmakers shun any developments here, given that it is universally regarded as ugly. The majority of quartz tickers do not compensate for the odd progression of dates in the contemporary calendar, if they use an analogue display. Certain specialised displays such as the regatta countdown are also left by the wayside and only Seiko has a Spring Drive minute repeater. Spring Drive is, of course, the ultimate mechanical-quartz hybrid that Seiko debuted way back in 1999. It remains exclusive to Seiko and no other firm has unveiled a similar concept, until Piaget in 2016 with the 700P movement. No developments were announced this year but it is good to see the idea still kicking around. **W**



Grand Seiko Black
Ceramic model

MATERIAL SCIENCES

In talking about new materials, we cannot escape looking at what these materials really are. This meant we had to go far beyond good old Wikipedia and re-educate ourselves on the hard sciences (no pun intended). Indeed, we learned all kinds of interesting facts about these materials and how the same are used in contemporary watchmaking.

We owe a great debt here to two magazines we reference heavily at WOW over the years, WatchAround and EuropaStar. The former is now out of the print game, existing only online, and this entire story is a tribute to Jean-Philippe Arm and company. You shall be missed.

STAINLESS STEEL

(Iron + Chromium + Carbon)

(Fe + Cr + C)



Varieties: 304L, 316L (Cr + Ni + Mo + Si)

Density: 7.9g/cm³

Applications: Innumerable alloys for all kinds of parts

Advantages: stainless, relatively anti-magnetic, semi-noble, easy surface hardening

Drawback: heavy, soft, expands in heat

ALUMINIUM

(Al)



Varieties: TiAlum or Alchron (Al + Ti: Zenith, Franck Muller),
LITAL (Al + Li + Zr: Richard Mille), Alusic (Al + SiC: Richard Mille)

Density: 2.7g/cm³

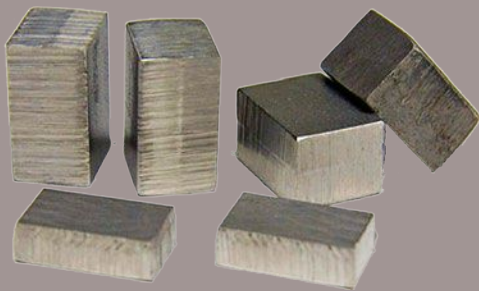
Applications: in many alloys; forerunner of ceramics; some movement components

Advantages: very low weight, cheap, forms a protective surface layer

Drawbacks: extremely soft, needs processing to be used for watch exteriors

INVAR
(Iron+Nickel)

(Fe+Ni)



Varieties: Elinvar (59 per cent Fe + 36 per cent Ni + five per cent Cr),
Nivarox family (typically 54 per cent Fe + 38 per cent Ni + eight per cent Cr + one per cent Ti + trace materials)
Density: 8.1g/cm³
Applications: virtually anti-magnetic, stainless, shape-memory alloy, does not expand in heat
Drawbacks: requires precise heat treatment to bring out its attributes; soft metal, can be magnetised under extreme conditions

CARBON

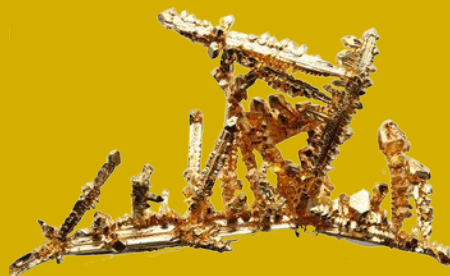
(C)



Varieties: woven fibres, nanotubes (highest thermal conductivity of all known materials)
Density: 1.8g/cm³
Applications: component of steel and other alloys; in crystalline form as diamond-like surface coating (DLC); as nanotubes or woven fibres
Advantages: infinite number of compounds, lightweight, resists compression
Drawbacks: brittle

GOLD

(Au)



Varieties: Yellow gold (75 per cent Au + 12.5 per cent Ag + 12.5 per cent Cu); pink gold (75 per cent Au + six per cent Ag + 19 per cent Cu), red gold (75 per cent Au + 25 per cent Cu), white gold (75 per cent Au + variable amounts of Pd and Ag)

Density: 19.3g/cm³

Applications: as 18K gold (75 per cent Au), mainly for cases, rotors, and sometimes in balance wheels; sometimes also for other movement parts

Advantages: stainless, non-magnetic, noble metal

Drawbacks: expensive, heavy, soft, expands in heat

SILICON

(Si)



Varieties: monocrystalline, polycrystalline

Density: not relevant

Applications: as pure crystalline sheets for escapement components; in alloys for exterior components (notably for dials)

Advantages: lightweight, non-magnetic, economical, self-lubricating, stainless

Drawbacks: Must be shaped by photolithography, extremely hard to machine

BRASS
(Copper+Zinc)

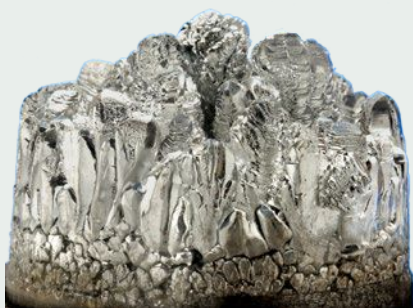
(Cu+Zn)



Varieties: Arcap, maillechort (Cu + Ni + Zn)
Density: 8.5g/cm³
Applications: innumerable alloys, all of them for movement components
Advantages: cheap, easy to machine, non-magnetic, low thermal expansion
Drawbacks: commonplace, soft metal, oxidises

MAGNESIUM

(Mg)



Varieties: Hublonium (Al + Mg: Hublot), WE54 (Mg + Y + rare earths: Richard Mille)
Density: 1.43g/cm³
Applications: in alloys for some movement components and case components
Advantages: extremely light and hard, preventive surface oxidation
Drawbacks: flammable, difficult and expensive to work

PLATINUM

(Pt)



Varieties: Palladium, Rhodium, and Tantalum are mined together

Density: 21.5g/cm³

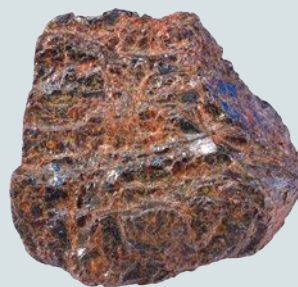
Applications: Mainly for cases, sometimes for rotors

Advantages: stainless, non-magnetic, noble metal

Drawbacks: very expensive, difficult to work, very heavy, soft

TITANIUM

(Fe+Ni)



Varieties: grade 5 (Ti + V + Al); grade 4 (99 per cent pure)

Density: 4.5g/cm³

Applications: mainly in cases and sometimes in movement components, especially in the escapement and tourbillon carriages

Advantages: lightweight, biocompatible, non-corrosive, very hard

Drawbacks: flammable, difficult to work, high thermal inertia

TUNGSTEN

(W)



Varieties: tungsten carbide (most commonly used ceramic in watchmaking)

Density: 19.3g/cm³

Applications: sintered powder to form segments for large and small winding rotors, forerunner of ceramics

Advantages: heavy, economical, stainless, hard

Drawbacks: heavy, fairly commonplace, complicated to work with

ZIRCONIUM

(Zr)



Varieties: Zalium (Zr + Al: Harry Winston), TZP (Zr + Y: Richard Mille)

Density: 6.5g/cm³

Applications: as an alloy mainly for cases

Advantages: non-corrosive, biocompatible, tough

Drawbacks: rare, difficult to work with



Sweets to the Sweet

Some watches induce a kind of hunger in us.
Here are nine tickers to whet your appetite

PHOTOGRAPHY **GPS**

ART DIRECTION AND STYLING **MAG BONG**



Cartier Ballon Bleu de
Cartier with enamel
granulation in pink gold,
price on application



Patek Philippe
Annual Calendar
Ref. 5396R-015
in rose gold,
\$70,200



Bulgari Serpenti
Incantati Skeleton
Tourbillon in pink
gold with brilliant-
cut diamonds,
price on application



Citizen
L EW5524-16E
in stainless
steel, \$1,508.70



HYT Skull Bad
Boy, \$125,000



Bell & Ross
BR 03-94
AeroGT Orange,
\$12,800



Franck Muller
Cintrée Curvex
7 Days Power
Reserve in rose
gold, \$77,340



Chopard
Mille Miglia
Classic XL 90th
Anniversary
Limited Edition
\$55,930

Audemars Piguet
Royal Oak Frosted
Gold in hammered
pink gold, \$72,100



A close-up, high-angle shot of a luxury watch movement. The watch has a polished metal case and a dark dial. The movement is visible through a transparent sapphire crystal case back, showing intricate gold-colored gears, a blue hand, and other mechanical components. The watch is positioned on the right side of the frame, with the rest of the image being a solid black background.

ON TOP OF TIME

Reflections on essential themes, core values, and key market trends



TRADITION'S FUTURE

Jean-Claude Biver discusses Zenith and its new mandate as the future of tradition, as exemplified in carbon nanotubes and an upcoming revolutionary new regulator

WORDS **JONATHAN HO** INTERVIEW **JONATHAN HO & ASHOK SOMAN**



*What was the last revolutionary innovation from Zenith? El Primero 1969.
And then? 1969. And then? 1969. Come on guys, this is 2017*

This may be the last time we hear from the boss of LVMH Watch and Jewellery Jean-Claude Biver on Zenith because the brand has a new CEO. In recent years, Zenith never found its stride even as the legendary Biver cemented Hublot's foundations and then embarked on a renewal project with TAG Heuer that seems, by all accounts, to be very successful indeed. Recently, Julien Tornare joined Zenith from Vacheron Constantin and Biver is with him at his last LVMH battlefield – shaping Zenith to define the future of watchmaking traditions. We caught up with “The Fixer” to discuss his strategy for the much beloved but commercially meandering brand.

We have noticed that skeletonising appears to be a common theme across all LVMH watch brands now...

Yes, it's because of me. I think it's a catastrophe to put a dial on a watch. A Renault wheel is beautiful because they put something on top of it. Take that away and you see the nuts and bolts. But on a Ferrari, it's made in such a way that even the wheel is beautiful; you can have it in your living room like a sculpture. You can't do the same with a wheel from (Renault). Likewise, it's a shame to have a dial hide the beauty of a movement. The true beauty of a watch for me lies in the movement, but if you feel that beauty lies in the dial, I respect that. Some enamel dials are truly remarkable. In general, 60 per cent of the time, I prefer a movement instead of a dial. Thus, the movement has to be built in a manner that is attractive. This is why I introduce this art form to all my brands, including Zenith.

Chronographs from Zenith measure a tenth of a second increment, some even go to a 100th of a second. Is accuracy still relevant in the context of modern watchmaking? Or are these PR value accomplishments?

Nobody cares about accuracy. We only care because it is part of Zenith's philosophy and the reason we exist. Zenith has specialised in extremely high accuracy since 1865, winning 2,322 Grand Prix awards for accuracy. Zenith's raison d'être was to produce the most accurate watches ever. It is part of our history and we should continue with it. Zenith is the future of tradition and if tradition was a chronograph that could display 1/10th of a second, then the future of tradition is a chronograph which can display 1/100th of a second. This is to maintain our heritage and not to repeat (ourselves). Zenith's direction today is accuracy and chronographs because that was the message of the brand. Is accuracy important to me? No. But neither do you need a Ferrari with 1,000 horsepower.

Would you say the emotional appeal of what you have on the wrist is more important than accuracy, the indication of time, and the complication?

What is important is the emotion, the quality, and the soul. Every timepiece made by hand has a certain soul; it is a signature of handcrafted objects. A machine-made object only has perfection but no soul. A robot does a better job than a human; I would prefer a robot to operate on me for high accuracy (for example). For luxury products, perfection might not be 100 per cent, but I would prefer it handmade because it is transmitted by fingers and they leave traces. These traces like the soul, like emotions, like love, are not visible. The invisible is more important than what is visible. When I was at Blancpain, I used to refer to the “invisible visibility” – what you don't see can be felt and thus you “see”. In *The Little Prince* (by Antoine de Saint-Exupéry), it was said that the essential things cannot be seen with the eyes. I still believe in this.

There's a lot of love for Zenith and a lot of collectors will tell you that they love Zenith, but ask if they own one, the usual answer is “no”...

This is because Zenith hasn't been very active in the last 20 years. If you are not active today, people will forget that you exist because there's so much information and a constant stream of marketing communication, which overtakes your attention. So yes, people love Zenith, but when asked why they don't own one, they don't really know. But I know why! It's usually because they didn't have the occasion to buy; never saw a Zenith pop-up store before; never saw a big Zenith advertisement; or have never been invited to a Zenith exhibition. Inactive, the brand will not get a bad reputation but it will stagnate. Not moving means nobody buys. But this is not bad in the sense that brand's reputation has not been destroyed. It's good to have a clean name, because bringing Zenith back is then not handicapped by reputation.

So your solution is to have more communication for the brand?

Yes, and innovation. What was the last revolutionary innovation from Zenith? El Primero 1969. And then? 1969. And then? 1969. Come on, guys. This is 2017. If Porsche would try to sell the same car that they made in 1969, they would not be successful. Sure, a few would like the 1969 Porsche because it's a classic car now. The construction may be similar, the engine is still in the back, but the modern Porsche is totally different. Zenith has remained in 1969 and in life, you cannot survive by staying in 1969. You will end up in a museum!



Does the Zenith Chronomaster El Primero Grande Date Full Open feature an open dial thanks to Biver's penchant for showcasing the movement?

Every watch made by hand has a certain soul; it is a signature of handcrafted objects. A machine-made object only has perfection but no soul

Taking into context the brand's performance as far as sales are concerned, is this something you worry that collectors and consumers take into account?


No. The collector doesn't really care about what is happening with the brand in terms of sales, they care about the beauty, exclusivity, and the history of the brand. Collectors at auction buy yesterday, not tomorrow. The consumer, on the other hand, wants to buy the future; he doesn't want to buy yesterday. He wants to have the most up-to-date watch. Zenith is the future of tradition and I want to deliver Zenith innovations to my consumers today. When more consumers want to buy today, more collectors want to buy tomorrow because they want to be more exclusive.

Speaking of "now", there is the Defy 21 with carbon nanotubes, is it a challenge to communicate to people how these materials improve the watches?

First, all mechanical watches are nonsensical from the point of view of rationality. But is art nonsense? No, art is necessary. I wish there would be more museums and art galleries because we need art. Rationally, we can live without paintings on the wall.

For me, I see watches as a form of art. Second, in this art, you still have constraints – it must still be a watch and if you want to make it watchmaking art, it must be fit within certain rules, namely accuracy and power reserve.

All materials that help in accuracy and power reserve support essential elements of a watch because those are the primary concerns of a watch. The Carbon-Matrix Carbon Nanotube (Biver cites this as the official name) gives extraordinary accuracy and provides better power reserve because the material is 100 per cent anti-magnetic and (does not react to temperature changes). It goes from -50 to 100 degrees Celsius with no variation. When it gets very cold, power reserve is consumed quicker (with traditional materials) and thus, the new material helps with power reserve and accuracy.

Living in the 21st century, if these new materials are available, why should we not use them? If you wake Abraham-Louis Breguet from the grave, and told him that in this 21st century, these new materials exist today, he would be very excited and say, "I want to use them!" This is because he was avant-garde. Breguet today would not want to use the materials from 1801, he would want to use the materials now. 

AN EXPLAINER: ZENITH DEFY EL PRIMERO 21 WITH CARBON-MATRIX CARBON NANOTUBE



The last time a Zenith El Primero started a conversation in the world of horology was in 1969. In 2017, a new Defy El Primero 21, housed in a 44mm case reminiscent of the original El Primero, in titanium and ceramic-aluminium, got the industry talking again. Finally, a new El Primero 21 calibre (named for the 21st century) with a COSC certification!

Featuring two separate escapements – one for regular time indication, the other for ultra-high frequency chronograph timing – each used a balance spring made of a new material, Carbon-Matrix Carbon Nanotube. Anti-magnetic and non-reactive to temperature changes, this new material provided the beating heart for a 36,000vph balance for normal time indication while the chronograph utilised its own 360,000vph balance for timing 1/100th of a second interval. Essentially, the gentle sweep of the big chronograph hand completes a rotation in 60 seconds in regular chronographs but the Defy El Primero 21 does it in a single second. However, the immense power requirements of powering a 360,000vph chronograph meant that you could only run the chronograph function for a maximum of 50 minutes.

However, the future of tradition isn't a balance with a carbon-matrix carbon nanotube hairspring either, it is something else – a heretofore unseen regulator.

Zenith's revolutionary new regulator will be officially unveiled in September 2017, as you read this.

The manufacture will unveil a new silicon-based regulator that will operate at a potentially super high frequency of 15Hz (comparatively, a traditional El Primero is 5Hz and quartz operates at 32,768Hz). More importantly, Zenith's new regulator would no

longer resemble the traditional hairspring with balance wheel constructs. Instead, it would require no oil, create no friction, and provide chronometric accuracy of one variation a day, making it the potentially most accurate mechanical watch today.

While it is true that a higher frequency movement tends to keep better time, the truth is, that speed is but one factor. Stability is the another contributing factor because the more stable the regulating organ, the more accurate as well. Today, a watchmaker has to find solutions that compensate for temperature, power, friction, gravity, and shock. Theoretically, if one could keep power constant, prevent variations in temperature, operate without gravity, shocks and magnetism, a frictionless mechanical calibre could give a quartz movement a run for accuracy.

That said, Biver claims that Zenith's new silicon-based regulator solves the issue of "constant force" by having 100 per cent amplitude at full power and 100 per cent amplitude near entropy (close to zero power reserve). Slated for an exclusive September 2017 launch in Germany, 10 unique pieces dubbed "Defy Laboratory" (since they are experimental) with Zenith's new regulator will go to market before the official launch of the series production model at BaselWorld 2018. Expect to pay around CHF30,000 (inclusive of first class airfare and personal delivery by Biver) for the privilege. The series production model is expected to cost similar to the current Zenith Defy 21 range.

PRECIOUS AND PRECISE

Independent and proud of it, watchmaker Rexhep Rexhepi's AkriviA brand is building up a community of collectors even as the man himself draws rave reviews from the likes of Kari Voutilainen

WORDS & INTERVIEW **ASHOK SOMAN**



When you begin your journey in watchmaking at 14, as an apprentice watchmaker and not a junior collector, that brings a whole new level of commitment to the entire affair. That, in one sentence, describes how Rexhep Rexhepi of AkriviA got his start in the watchmaking trade, making it sound like the story of someone in the 19th century or earlier. The 30-year-old watchmaker has earned plaudits from no less than Kari Voutilainen and been championed by the folks at Hodinkee for his traditionally made watches, and probably for his unusual background and relative youth in a world where the grey-haired rules.

A few details about AkriviA are in order at this moment. The young brand sports an ancient Greek name (meaning precision), a Kosovo native as its founder and leader, and a Geneva base of operations. Although AkriviA was founded in 2012, the company and its leader share an inextricable link, both in Rexhepi's personal history and in the history of watchmaking.

The aforementioned apprenticeship, for example, was at Patek Philippe and it kicked off a rapidly progressing career for Rexhepi. After many years at the Geneva stalwart, Rexhepi

furthered his career at BNB Concept, and then at F.P. Journe, which was the last time he was an employee.

Today, he is the man behind such temporal delights as AK-06, which was the brand's 2017 debut at BaselWorld, and its first wristwatch to do without the tourbillon. In the arrangement of the elements seen dial-side in this watch, one can see what inspires Rexhepi – as a young boy, he was fascinated by how mechanical watches worked and his curiosity eventually took him to Switzerland and put him on the course to create the very objects that so fascinated him.

"I started AkriviA to share my passion for watchmaking and luckily, people were interested! For me it is about the human touch – every component in my watches has a story; a story about what the watchmaker went through to overcome obstacles. I only make 25 watches a year (each of which has) the spirit of an artist behind it. It is not something from history, there is a real living person behind AkriviA watches."

Obviously, watchmaking is not about novelties for this bright-eyed young man, although he did find it quite a novelty as a child...



AkriVIA Tourbillon
Chronographe
Monopoussoir

What is it about watchmaking that was so interesting to you that brought you into it?

When I was still in Kosovo (as a child), my father would visit and he, of course, had his watches, which were from Switzerland, and these were very interesting to me. I was particularly interested in the sound of the watches – the beat of the mechanical movement – and it inspired me to try to take some of the watches apart! I never managed to open any of them but as you can imagine, this resulted in some fights with my father!

Tell us about your early experiences with watchmaking in Switzerland.

When you arrive in Switzerland, the first thing you see is all the (advertising) for watch brands. This is what I saw when I moved to Switzerland (after the outbreak of war in Kosovo), and then later, I found that my neighbour (in Switzerland) with whom I went skating, was also a watchmaker. Coming from Kosovo, where there was only war at that time, these experiences gave me a new perspective on life. I cultivated my curiosity in watchmaking and it was obvious that I had to go deep into watchmaking – just the idea that this little mechanism was (tirelessly) providing time was something I had to explore.

I produce watches for myself, without any shortcuts, with a traditional code. In a way, I feel like a chef working in a traditional way, up to a point. My love and my passion go into it, and luckily, people somehow liked it. At first though, it was for myself, as a selfish watchmaker who was testing himself – to see what I could accomplish. It was amazing to me to learn that so many collectors and other important people liked what I was doing. It gives me great pleasure, in the end, to share what I have done with them, and with journalists and people from the Patek Philippe school when they come to visit.



AkriVIA Tourbillon
Heure Minute

What about watchmaking as a cultural force, which you must have felt at a very young age?

While I was in Kosovo, it was wartime and it was a poor country. We were behind in education, there was no music... It was crazy. I was born in a village, part of a big extended family. There were 25 of us there, and my father (on his visits from Switzerland) was careful not to make a show that we were a little better off (from his extended family and neighbours). As a child, when you don't have toys, you have to use your imagination, or use your imagination to make your own toys. I remember, at eight years old, I built slides for me and my friends.

So when I saw things and objects I had never seen before, I wanted to understand them... So a watch for me, coming with my father from Switzerland, was a new thing for me. I wanted to understand it, to know how it worked. Eventually, I realised that they were like cars, a little bit (but with an important difference). The watches did not change as much over time as the cars. The evolution of cars was much faster, and you could even say the mechanical watches were not evolving at all, or so slowly that you couldn't see it. It was timeless – it is timeless and is the only sort of object today that has this characteristic.

I was impressed by this, and by the watchmakers who created these objects. It seemed like they had to have a lot of knowledge, a lot of education, to create these objects. Their passion was very impressive – it made a (strong impression) on me (at a young age).

Now that you're in the trade, what do you think of the dominance of major corporations in watchmaking? Does this give you and other independent watchmakers an opportunity?

For AkriviA, we have reached – after five years – production of 25 pieces a year and we have recognition and stores around the world. We did all this without any financial partners and we will continue in this way. All I need are customers and retail partners, of course.

What I'm saying is that I don't need to listen to the advice of a financial partner on how to run AkriviA, in terms of objectives and targets...I'm not in this trade for this reason. I'm not here to make (shareholders) rich; I'm here to make watches. AkriviA is independent and will stay independent. I want to keep the power to say no (or yes), to offer watches at the speed that I want, and to be creative – all without the (pressure) of financial partners.

A lot of watchmakers in this trade lost their names because of (financial partners). They are no longer in the company and they can no longer use their own names in watchmaking. This is not the way for AkriviA. Anyway, we are small – we have six calibres – so a financial partner just wouldn't make any sense. We can make more (than 25 timepieces) a year, but this is not the goal.

Really, the goal for me is to show people that having an AkriviA is prestigious, that it is difficult for (AkriviA) to produce the watches, and that we don't take any shortcuts in terms of quality. I want to guarantee our collectors that AkriviA timepieces are rare and very special – not something anyone can have. I have to protect this position very strongly.





I cultivated my curiosity in watchmaking – just the idea that this little mechanism was (tirelessly) providing time was something I had to explore

How do you feel about the use of modern materials in contemporary watchmaking?

For me, technology in watchmaking should not be at the highest level... You know the question is, does silicon, for example, really make a mechanical watch more precise (than existing materials). Has any watch with (these new materials) won a chronometry prize or the GPHG prize for precision? The answer is no, because today, these materials are not used to make watches that are more precise.

You can have more precision in the construction, in making the components. That is for sure. To me though, I think the best precision we can have today is in the watchmaker (himself or herself) touching every part and making fine adjustments. It is a question of skills and know-how like it is with a surgeon in medicine.

In my opinion, the only reason most brands use silicon is for efficiency (to get rid of watchmakers). Parts can be made and assembled

without a watchmaker making any adjustments. Companies using silicon can (thus) eliminate human resources... You don't have to pay more for more human resources. It is a good compromise for the big groups because they can just replace parts, not repair them, and not pay people to repair things. It isn't that I am not OK with this, but I have to say it is not my vision... Not what I want to do (at AkriivA).

You know, I can show performance tests from some companies from today and also from 15 years ago, maybe, and you can see that there is not much difference between what they achieved with traditional materials and what they achieve today, with silicon. Let me put it another way. I find Rolex very impressive. Why? Because they never put any new materials into the watches without testing for years, and without knowing that there will be a real difference in the performance. Silicon (and other materials) is just about money for the big groups. **W**

BRIDGING THE GAP

For Corum's recently appointed CEO, Jerome Biard, says that the brand's strategy lies in being able to capture the attention of both newcomers and seasoned collectors

WORDS & SINTERVIEW KELVIN TAN & JASON KWONG*

Corum encompasses a wide range of offerings. What is the unifying factor for all these pillars and what do you think Corum represents for watch lovers?

The unifying factor is boldness. Each collection is built with passion and creativity. We want to create avant garde timepieces because it's in our DNA. This is also what differentiates Corum for watch lovers. Our watches are unique and are meant for individuals who deserve only the outstanding in life.

Is there a difference in preferences for Corum watches across different continents and regions?

As a general trend, I believe there are differences and some of our lines have a stronger impact in a region. For example, the Admiral's Cup is very popular in Japan while the Bubble has been a hit in the United States. Likewise, we see Asia favouring the Golden Bridge while Europe is more balanced in terms of what is being purchased by collectors.


Do you have a personal story to share about a loyal Corum customer?

The pianist Joachim Horsley once told me once that he fell in love with the architecture of the Golden Bridge movement. He drew several parallels between the watch and his musical instrument. A few months later, we were inspired to collaborate with him!

Do you think that Corum is where it should be today? If not, what needs to be done? What are your ambitions for the brand?

Corum is an exclusive brand with a limited production capacity. My goal is to determine the best strategy to connect with watch lovers looking for something different. We need to cultivate awareness and to reassure clients about the value of their timepiece. As such, "Craft your Dreams" has been our calling card to anyone interested in acquiring a Corum timepiece. I mean something as playful as the Bubble is coup de coeur for budding collectors.

In your opinion, what needs to be done for Baselworld to remain effective in a digital age with online retailing?

Baselworld has two audiences: the professionals and the final customers. Both need to touch and feel the products. They also need to meet the people behind the scenes to understand the brand philosophy. Online retailing is the way forward and it shouldn't be detrimental to the industry. As a natural progression, you'll likely see the watch on the internet first. But when you hold it in your hands and try it on, that's the most important component when choosing a timepiece. 





EXTREME MEASURES


The CEO of Bell & Ross talks about how risk-taking behaviour has often lead to perfecting extreme timepieces

WORDS & SINTERVIEW **JASON KWONG**



"I remember the film *The Right Stuff* about these heroic test pilots who would push themselves well beyond their limits in rocket engine-powered aircrafts such as the Bell X-1. You've probably also heard that last year's BR-X1 Hyperstellar is now onboard a space mission. At Bell & Ross, we are often inspired by extremes and that's my vision for the company. Team spirit is crucial: when the team is happy, I'm happy. Just like how when we first manufactured the Hydromax dive watch back in 1997 – by filling its case entirely with fluorinated oil – for a record-breaking 11,000m of water resistance, I like to believe that our timepieces should be able to withstand the harshest of environments: be it on land, in the air, or in the water such as the case for the BR 03-92 Diver that's fitted into our iconic square case.

"And that's what drives our 'Watch Beyond' advertising campaign that takes us into the helmets and diving masks of these heroes. We see what they see as they face down an unknown fate. For instance, you'll see the BR03-94 RS17 strapped on the gloved wrist of a Renault Sport Formula One driver and a glimpse of the intensity from the cockpit. Evidently, there are the design cues in the trilogy of RS17 watches – from the carbon-fibre dials (where applicable) to the anodised aluminium chronograph start/stop pushers – distilled from elements that you'll see on the car, most notably the vibrant colours of the buttons on the steering wheel. Unquestionably, you see the road, and you go beyond!

"In the same vein, it's a sapphire sandwich as we aimed to place the movement of the BR-X2 Tourbillon Micro-Rotor as close to the wrist as possible. As you know, we made only five of the first BR-X1 Sapphire Tourbillon. I had to apologise to other customers who wanted the watch because all five pieces were sold by December last year. So, we moved quickly, in the few months that we had, to develop the new watch. This was done by fully integrating a movement plate with the extra flat square watch case for a height of just 4.05mm. It's no longer a chronograph. Yet, I take great pride in admiring the flying tourbillon in front and the micro-motor of BR-CAL.380 automatic calibre from the sapphire case back. I personally like round watches but I wore it the entire time during Baselworld because of its technical simplicity and exclusivity." 





ENLIVENING THE ART OF FUSION


A mesmerizing highlight from the 2017 range of Hublot timepieces



On the 17th of May 2017, Hublot and The Hour Glass unveiled the all-new Hublot 2017 Baselworld collection at an exclusive evening preview at the state-of-the-art luxury residence Le Nouvel KLCC. In attendance were distinguished guests and fans of the brand. The occasion also marked the first collaboration between The Hour Glass and luxury property owner Wing Tai Asia, the developer of Le Nouvel KLCC.

"We are glad that Wing Tai Asia is hosting us at this beautiful and innovative space – the luxurious Le Nouvel KLCC designed by none other than the world renowned architect, Jean Nouvel himself, who shares the same spirit of art and innovation that Hublot is known for," said Mr. Teh Soon Kheng, General Manager of The Hour Glass.

Highlighted at the preview were the innovative Hublot timepieces introduced at Baselworld 2017. Among these was the Techframe Ferrari 70 Years Tourbillon Chronograph collection, conceived in collaboration with the Ferrari Design Centre. Also present were the avant-garde coloured sapphire watches, the Big Bang UNICO Red and Blue Sapphire watches as well as delightful ladies watches such as the Big Bang Broderie Sugar Skull and the Spirit of Big Bang Moonphase.

Guests at the exclusive soiree were entertained to a live performance by pianist Cheah Wei Li and top illusionist and mentalist from Malaysia, Andrew Lee. 



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A JUBILEE TO REMEMBER

Hublot's Big Bang Merdeka rides on the jubilant waves of Malaysia's national day celebrations

It was just two days before the nation of Malaysia celebrated its 60th anniversary of independence when Hublot, together with The Hour Glass Malaysia, brought together guests and members of the media to celebrate this momentous occasion with the launch of a limited edition version of the iconic Hublot Big Bang – the Hublot Big Bang “Merdeka”. Aptly held at Antara Restaurant, housed in a century-old restored building in the heart of Kuala Lumpur, the event also witnessed the attendance of guest of honor, prominent historian Tan Sri Khoo Kay Kim, and Miss Universe Malaysia 2017, Samantha Katie James. Along with Mr. SK Teh, General Manager of The Hour Glass, they unveiled the special edition watch, accompanied by a traditional kompang band march into a hall that was decorated with 50 portraits of Tunku Abdul Rahman, Malaysia's 1st premier. The watch is limited to only 60 pieces and available exclusively in Malaysia.

“Hublot is pleased to honor this historical milestone tonight in Kuala Lumpur together with our long-time partner, The Hour Glass. We are happy to share with our Malaysian fans this special-edition timepiece dedicated to paying homage to their homeland. It was such a privilege for us to have Malaysian historian, Tan Sri Khoo Kay Kim as the guest of honor tonight to mark the occasion”, commented Mr. Ricardo Guadalupe, CEO of Hublot.

The event continued with a melodic performance by Ushera Yusof, and a nostalgic sharing session with Tan Sri Khoo, who spoke about the good old days. 




REINVENTING THE MASTERPIECE

The all new BR-X2 is adorned daringly with a Tourbillon Micro Rotor

On the 27th July 2017, Kuala Lumpur saw Bell & Ross' proud reveal of its latest masterpiece watch, the BR-X2 Tourbillon Micro Rotor. Representing an all-new generation of watches to come from the popular and innovative brand, the watch showcases that Bell & Ross' willingness to continue pushing boundaries – in this case, by adopting extreme methods in the simplification of watchmaking construction.

A special preview cocktail event hosted by Bell & Ross was held at Element Hotel KL for both Bell & Ross and Cortina Watch VIPs and guests along with watch enthusiasts, celebrities and media members. The new hotel, with its unparalleled views of the KL skyline is a perfect setting for the launch of the BR-X2. At the event, guests had a sneak peek of the next generation watch and its innards.

During this event, Bell & Ross also announced its month-long lifestyle pop-up store in collaboration with Cortina Watch, which ran from the 1st to the 31st of August 2017 at Suria KLCC. The pop-up store saw an exhibition showcasing the BR-X2 Tourbillon Micro Rotor and the full collection of the BR-X1. 






ICONS APLENTY

Omega proudly exhibits its iconic and legendary watches in brilliant displays

Famous Swiss watchmaker, Omega, held a private viewing session for the members of the media at Ritz-Carlton Hotel, Kuala Lumpur. The exclusive occasion ensured that Omega novelty timepieces were put forth in their dazzling display watch towers. These displays helped to highlight the new Omega watches, which first debuted at Baselworld 2017.

With watches that contain Omega's new movements that carry the Master Chronometer rating as well as other premieres that included the Commander's Watch, the Speedmaster 38MM, the Trilogy, the De Ville Prestige, and the remarkable ETNZ Collection, it was definitely a memorable afternoon that left guests in awe of the brand.

Subsequently, the media viewing session, Omega also hosted an exclusive afternoon tea session with VIPs, celebrities, socialites and guests. They were hosted and entertained by Mr Joseph A. Boudville, Brand Manager of OMEGA Malaysia. 





BIG TWO-O

Men's Folio Malaysia celebrates 20 years of men's luxury fashion and lifestyle

Men's Folio Malaysia commemorated the 20th anniversary of Men's Folio at Imperial, Zouk KL last month. Emceed by Adrian Seet, Olivier Burlot, CEO of Heart Media, extended a warm welcome to guests before kicking off the momentous celebration. Embracing the spirit of streetwear, attendees were presented with Superdry fashion show, presenting its latest collection. We would like to thank all our sponsors including Bad Lab, Casio, Groom Artistry, Jack Black, Kiehl's, Phillips, Superdry, Tealive and The Botanist. Last but not least, Grab for transporting our guests to and from the party venue comfortable, and most importantly, safely. movements that carry the Master Chronometer rating as well as other premieres that included the Commander's Watch, the Speedmaster 38MM, the Trilogy, the De Ville Prestige, and the remarkable ETNZ Collection, it was definitely a memorable afternoon that left guests in awe of the brand. 



BOUTIQUES

Where to browse, buy, service, and repair your watches

A

AUDEMARS PIGUET
UG29, Adorn Floor, Starhill Gallery, KL

ATG WATCH
Lot G25, Fahrenheit88, KL

B

BEDAT & CO
UG31, Adorn Floor, Starhill Gallery, KL

BELL & ROSS
Lot 3.46.00, Level 3, Pavilion, KL

BREGUET
LL 1, Lobby Level, JW Marriott Hotel, KL

BRM CHRONOGRAPHES
UG21, Adorn Floor, Starhill Gallery, KL

BULGARI
2.23.00 & 3.25.00, Level 2 & 3 Pavilion, KL

G20, Ground Floor, Suria KLCC, KL

C

CARTIER
Lot 3.14, Level 3, Pavilion KL

CASIO G FACTORY
Nu Sentral Mall, Lot LG13, Level LG, KL

IOI City Mall, Fk2A, Level 1, IOI Resort, Putrajaya

1 Utama Shopping, Lot S222A, 2nd Floor, Lebuhraya Bandar Utama PJ

Isetan of Japan Sdn Bhd, Suria KLCC, 3rd Floor, KL

Isetan The Japan Store, Ground & 1st Floors, Lot 10 Shopping Mall, KL

Mid Valley Megamall, TK-05, Third Floor, Mid Valley City, KL

Fahrenheit 88, Lot F1.44 & F1.45, 1st Floor, KL

Sunway Pyramid, Lot F1.83, 1st Floor, Bandar Sunway, PJ

Paradigm Mall, Lot 2F 09, Kelana Jaya, PJ

Aman Central Mall, Lot 1-39, Lebuhraya Darul Aman, Alor Setar, Kedah

Gurney Paragon Mall, Lot L3.16, Level 3, Persiaran Gurney, Penang

East Coast Mall, L1-PK03, Level 1, Putra Square, Kuantan, Pahang

Dataran Pahlawan, BS007, Lower Floor, Bandar Hilir, Melaka

Johor Bahru City Square, Lot MK2-13A, Level 2, Johor Bahru, Johor

Suria Sabah Shopping Complex, Lot 1-93, 1st Floor, Kota Kinabalu, Sabah

The Spring Mall, Lot 106, Level 1, Persiaran Spring, Kuching, Sarawak

CERRUTI
G1.117 & G1.118, Ground Floor, Sunway Pyramid, PJ
P2.16.00, Level 2, Pavilion, KL

CHANEL
Lot C-G06-G07, Ground Floor, New Wing Tower, Suria KLCC, KL

CHOPARD
2.24.00 & 3.26.00, Level 2 & 3, Pavilion, KL

G33, Indulge Floor, Starhill Gallery, KL

G07, Ground Floor, Suria KLCC, KL

CITY CHAIN
F-126 & 127, 1st Floor, 1 Utama Shopping Centre (Old Wing), PJ

C09-C10, Concourse Level, Suria KLCC, KL

F-92, 1st Floor Zone, Mid Valley Megamall, KL

O1-35, First Floor, Berjaya Times Square, KL

LG60, Lower Ground Floor, Alamanda Shopping Centre, Putrajaya

G01, IOI Mall, Puchong, Selangor

1.20.00, Level 1, Pavilion, KL

F26, First Floor, Jusco Bukit Tinggi, Klang, Selangor

G70, Ground Floor, Jusco Bukit Tinggi, Klang, Selangor
LG 1.112, Lower Ground One, Sunway Pyramid, PJ

G9, Ground Floor, Lot 10 Shopping Centre, KL

Lot 170-01-12, Plaza Gurney, Penang

Lot F-51, 1st Floor, Aeon Tebrau City, Taman Desa Tebrau, Johor Bahru

Lot G-20, Ground Floor, Mahkota Parade, Melaka

Lot G-59, Ground Floor, The Spring, Jalan Simpang Tiga, Kuching, Sarawak

Lot G27, Ground Floor, Suria Sabah Shopping Mall, Kota Kinabalu, Sabah

CORTINA WATCH
UG 34, Starhill Gallery, Adorn Floor, KL

Lot G03, Ground Floor, Fahrenheit 88, KL

Lot 110, 1st Floor, Suria KLCC, KL

G-231, Ground Floor, 1 Borneo Hypermall, Kota Kinabalu

170-G-33/33A, Ground Floor, Plaza Gurney, Penang

D

DAPPER & GENTRY
Gateway @ KLIA2

F

FENDI TIMEPIECES
P2.04.00, Level 2, Pavilion, KL

G

GUCCI
G37-38, Ground Floor, Center Court, Suria KLCC, KL

2.21.00 & 3.23.00, Level 2 & 3, Pavilion, KL

H

HANG THAI WATCH SDN BHD
G-49, Ground Floor, Tropicana City Mall, PJ

HERMES
UG30C, Adorn Floor, Starhill Gallery, KL

HOUS PASSION
G1, Ground Floor, Lot 10 Shopping Centre, KL

HOUS PASSION QUEENSBAY

GF-98, Queensbay Mall, Bayan Lepas, Penang

HUBLLOT

UG15(B), Adorn Floor, Starhill Gallery, KL

G35B, Ground Floor, Suria KLCC, KL

HYT

UG19 Adorn Floor, Starhill Gallery 181 Jalan Bukit Bintang KL

I

IWC
3.40.00, Level 3, Pavilion, KL

J

JAEGE-LECOULTRE
G36, Indulge Floor, Starhill Gallery, KL

K

KHRONOS - UNIQUE HORLOGERIE
UG1, Adorn Floor, Starhill Gallery, KL

L

LONGINES
Lot 2.01.04, Level 2, Pavilion, KL



LOUIS VUITTON

G19, 23, 29, 30 & 37, Indulge Floor, Starhill Gallery, KL

G26A&B & G27, Ground Floor, Suria KLCC, KL

M

MAURICE LACROIX

UG27, Adorn Floor, Starhill Gallery, KL

MIDO

Lot 4.106.01, Level 4, Pavilion, KL

Lot 170-G-KA, Plaza Gurney, Penang

MONTBLANC

2.18.00 & 3.20.00, Level 2 & 3, Pavilion, KL

G29, Ground Floor, Suria KLCC, KL

O

ORIS

GK105, Ground Floor, 1 Utama Shopping Centre (Old Wing), PJ

OMEGA

G15A & 16, Indulge Floor, Starhill Gallery, KL

2.38.00, Level 2, Pavilion, KL

Lot 106, Level 1, Suria KLCC, KL

Lot 170-G-17/18, Ground Floor, Plaza Gurney, Penang

P

PATEK PHILIPPE BY CORTINA

G41 & G42, Ground Floor, Suria KLCC, KL

UG34, Adorn Floor, Starhill Gallery, KL

PIAGET

G38, Ground Floor, Suria KLCC, KL

R

RADO

P2.05.00, Level 2, Pavilion, KL

RAYMOND WEIL

Lot 105A, 1st Floor, Suria KLCC, KL

RED ARMY WATCHES

G136, Ground Floor, 1 Utama Shopping Centre, PJ

P4.04.00, Level 4, Pavilion, KL

L1-07, Level 1, Tropicana City Mall, PJ

170-G-56, Plaza Gurney, Penang

RICHARD MILLE

UG15A, Adorn Floor, Starhill Gallery, KL

ROLEX

3.37.00, Level 3, Pavilion, KL

130, Level 1, Suria KLCC, KL

ROLEX BY CORTINA WATCH

UG 34, Starhill Gallery, Adorn Floor, KL

170-G-33/33A, Ground Floor, Plaza Gurney, Penang

G-231, Ground Floor, 1 Borneo Hypermall, Kota Kinabalu, Sabah

S

SEIKO

Lot LG1.112, Lower Ground One, Sunway Pyramid, PJ

SINCERE FINE WATCHES

UG19, 24, 34, & 34A, Adorn Floor, Starhill Gallery, KL

G34, Ground Floor, Suria KLCC, KL

2.01.07, Level 2, Pavilion, KL

SWISS WATCH GALLERY

2.46.01, Level 2, Pavilion, KL

T

TAG HEUER

3.44.00 & 3.45.00, Level 3, Pavilion, KL

Lot 124, First Floor, Suria KLCC, KL

170-G-28, Plaza Gurney, Penang

GF97, Queensbay Mall, Penang

G238, Ground Floor, The Gardens, Mid Valley City, KL

THE HOUR GLASS

2.41.00, Level 2, Pavilion, KL

G20 & G21, Ground Floor, Lot 10 Shopping Centre, KL

G226 & G227, Ground Floor, The Gardens, Mid Valley City, KL

TISSOT

G-11, Ground Floor, Fahrenheit 88, KL

G009, Ground Floor, Mid Valley Megamall, KL

Lot 209, Second Floor, Suria KLCC, KL

U

ULYSSE NARDIN & REUGE

UG22 & 25, Adorn Floor, Starhill Gallery, KL

V

VERTU

2.53.00, Level 2, Pavilion, KL

W

WATATIME

LG144, Lower Ground Floor, Sg Wang Plaza, KL

G-055, Ground Floor, Mid Valley Megamall, KL

2.61.00, Level 2, Pavilion, KL

LG19, Lower Ground Floor, Subang Parade, PJ

G107, Ground Floor, 1 Utama Shopping Centre (Old Wing), PJ

G1.09, Ground Floor, Sunway Pyramid, PJ

G52, Ground Floor, Mahkota Parade, Melaka

G16, Ground Floor, Jaya Jusco, Kinta City Shopping Centre, Ipoh, Perak

WATCHSHOPPE

F303, First Floor, 1 Utama Shopping Centre (New Wing), PJ

G-043A, Ground Floor, Mid Valley Megamall, KL

G1.123, Ground Floor, Sunway Pyramid (New Wing), PJ

170-G-16, Ground Floor, Plaza Gurney, Penang

WATCHES OF SWITZERLAND

G208A & B, Ground Floor, The Gardens, Mid Valley City, KL

WATCH ZONE

Lower Ground Level, LG341A, 1 Utama Shopping Centre (New Wing), PJ

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A wide-angle photograph of a Swiss mountain valley. In the foreground, a dense forest of evergreen trees is covered in a thick layer of snow. Below the forest, a small town with numerous buildings and a church spire is visible. The town is situated in a valley, with a river or stream winding through it. In the background, several large, rugged mountains are covered in snow, with sharp peaks reaching into a clear blue sky. The overall scene is a picturesque representation of a Swiss winter landscape.

TOWN AND COUNTRY

Picturesque Bern and Lucerne offer enough stunning natural wonders, cultural landmarks and sophisticated conveniences to please even the most fastidious traveller

WORDS **AILEEN SOH**



BERN BABY BERN

Chocolate-box pretty and famously laid-back, Berne with its cobblestone streets, arcades and wooded slopes wrapped in a loop of the River Aare is Switzerland's capital city. A UNESCO World Heritage Site celebrated for its stunning medieval architecture and views of the Bernese Alps, this impeccably preserved town also had some rather famous former inhabitants, no less than Albert Einstein and Paul Klee. Today sites associated with these two towering figures of the 20th century attract hordes of tourists from all over the world but beyond that, Bern has enough charm and charisma for one to spend days exploring its cobbled shopping streets and picturesque market squares while pausing in between for meals in top-class international restaurants.

WHAT TO DO

Start at the Old Town of Bern where the magnificent Bundeshaus, or Federal Assembly Building, is a physical manifestation of the unification of the Swiss Confederation. The late 19th century structure design was built from materials from all Swiss cantons and its 26 fountains represent the different cantons that make up the country. The Zytglogge clock tower (www.zeitglockenturm.ch) is an unmissable landmark and you'll want to catch the whimsical hourly performance incorporating a dancing jester, parading bears and a gilded figure named Chronos who flips an hourglass and opens his mouth with each strike of the bell. Kitschy though it sounds, this same clock inspired a young patent clerk named Albert Einstein and his groundbreaking Theory of Relativity. Two other essential stops are the late Gothic Münster (cathedral) with its stunning 15th-century Last Judgment over the main portal and the

historical three-arched Nydegg bridge.

Legend has it that the Duke of Zähringen who founded Bern in 1191, named the city after the bear he killed on a hunt. Bears have been the city's heraldic animal ever since and Bern has a long-standing tradition of keeping bears in Bear Pits. In today's politically correct times, this has thankfully evolved to a bear-friendly Bärenpark (www.tierpark-bern.ch), a beautifully landscaped park along the River Aare where the bears are free not only to climb, fish and play, but also retreat and relax. Admission is free and open year-round.

Bern was where Einstein formulated his Theory of Relativity and you can visit the apartment where it was developed at The Einstein House (www.einstein-bern.ch). The residence features furnishings from when the Nobel Laureate lived here, photos and documents also give the visitor an insight into Einstein's Bernese years. This historic location is home to the Einstein Café and cigar lounge where you can ruminate on quantum physics while having The Einstein Kaffee house blend and Einstein beer.

A defining voice of 1920s Bauhaus and one of the greatest of the Modern masters, Paul Klee was born just outside Bern so it's only fitting that the city houses the world's largest collection of his work. Called Zentrum Paul Klee (zpk.org), enjoy 4000 plus works of art among the specially designed climate controlled building which filters natural light while protecting the art from harmful UV radiation. In fact, the unusual wavy building designed by Pritzker Prize winning architect, Jean Nouvel itself is a masterpiece worth exploring. Apart from the Klee collection, Zentrum houses a music and performance venue, and through simultaneous examinations into different media, it expresses the interdisciplinary approach Klee explored in his lifetime.

WHERE TO EAT AND DRINK

The Granary or Kornhauskeller (www.kornhauskeller.ch) was originally the wine cellar of the city's granary. Vaulted ceilings sport frescoed folkloric figures and this darkly atmospheric restaurant serves up traditional Swiss dishes, such as veal and rösti with a modern twist. Housed in a converted tram-shed, Restaurant Altes Tramdepot (www.altestramdepot.ch) is crowded, casual and fun, specialising in hearty Swiss dishes such as Bavarian sausages with mustard and pretzel or spätzli (Swiss pasta) au gratin. Admire the fantastic view of the Old Town of Bern while swigging the in-house brewed beer.

For an excellent cup of coffee, Adriano's Bar & Café (www.adrianos.ch) opposite the Zytglogge always delivers thanks to its own in-house roasting plant. Freshly made sandwiches and a laid-back atmosphere make this café an excellent choice for a relaxed meal.

WHERE TO STAY

Just over the Kornhaus Bridge from the Old Town, The Allegro (<http://www.kursaal-bern.ch/Hotel>) is conveniently located in the heart of the city yet set amongst an environment of great natural beauty. This four-star-superior property is part of a modern business and leisure complex that includes a conference centre, casino and restaurants, and boasts breathtaking views of the historic old-town and the distant Alpine peaks from the higher hotel rooms and terraces.



THE LIGHT STUFF

On the shores of Lake Lucerne, or Vierwaldstättersee and straddling the River Reuss is the lyrically lovely central Swiss city of Lucerne. Often known as The City of Light, Lucerne's name goes back to a miracle of light said to have happened here. Legend has it that an angel showed Lucerne's first settlers with a light where to build a chapel in honour of St. Nicholas, the patron saint of fishermen and sailors. Today this modern yet marvelously medieval city is still as popular as it was since the likes of Goethe, Queen Victoria and Wagner lingered over her views in the 19th century. Compact enough to be walkable but large enough not to be a backwater, Lucerne's bus and lake boat stations are next to each other, encouraging trips along the scenic lake. Switzerland's Museum of Transportation is in the town where a 40-minute train journey takes you to Engelberg, famous for its mountain scenes and three-stage cable car going up to the 3,200-metre Tittlis mountain's ski area.





WHAT TO DO

Lucerne's old town's main landmark is the flower-bedecked Chapel Bridge over the Reuss river. The oldest covered bridge in Europe features a series of 17th century historical paintings in the roof gables and a stone octagonal Water Tower halfway across it. The old town makes up most of the north of the Reuss where you can stroll around admiring the intricately painted burgher houses and the well-preserved mediaeval Musegg wall and its nine towers – all part of the old fortifications of the city.

The Swiss are renowned for their precision and punctuality, qualities which lend themselves to how the country has arranged its efficient transport system. From the astounding engineering to navigate Switzerland's treacherous passes and vertiginous peaks to the excellent public transport, the Swiss Transport Museum (www.verkehrshaus.ch) documents it all. Cleverly designed and state-of-the-art, this museum is perfect for kids of all ages – it even houses an IMAX theater and planetarium (space travel is also covered).

The legendary Swiss Army Knife is another icon of Swiss precision and design. No other place allows you to assemble and personalise your own knife than at the Swiss Knife Valley Visitor Center (www.swissknifevalley.ch) in Brunnen, on the shores of Lake Luzern. Take a leisurely boat ride to Brunnen where it's just a short walk to the Visitors Center and discover the fascinating history behind this trusty little tool.

One could quite easily explore Switzerland travelling from

cheese dairy to cheese dairy, such is the diversity of cheese produced here. The Show Cheese Factory (www.schaukaeserei-engelberg.ch) in Engelberg (which means the mountain of the angel) is just a short train ride from Lucerne and enroute to Titlis. It's located on the grounds of Engelberg Benedictine Monastery (also worth a stop) and showcases a state-of-the-art cheesemaking operation. After watching the cheesemakers make the famous Engelberger Klostersglocke (Engelberg Monastery Bell), don't forget to savour the dairy goodies on your way out.

From Engelberg, ascent to Titlis, the region's only accessible glacier via Titlis Rotair, the world's first revolving cable car which affords a spectacular 360-degree view. Up at the peak, there is only one season: winter – being located above the snow line, it has permanent snow cover perfect for skiing. For non-skiers there's still plenty of ways to get the adrenaline pumping, for starters you can try the Titlis Cliff Walk, Europe's highest situated suspension bridge at 3041 metres altitude. Built to celebrate the 100th anniversary of the Engelberg-Gerschnialp cableway over Mount Titlis, steel yourself to take the 150 heart-stopping steps over the 98 metres long bridge with a 500-metre drop. Catch your breath on the cable car ride to Trübsee, one of the intermediate cable car stops where you can relax among views of the scenic lake and get that adrenaline going again if you drop by Trübsee Adventure Park, the first and only snowXpark in Europe.


WHAT TO EAT AND DRINK

Part of the historic Hotel Wilden Mann (www.wilden-mann.ch), Burgerstube's early 20th century neo-gothic style lends an old-fashioned air to its dining room dating from at least 1517. Despite the coffered ceilings, coats of arms, wood paneling, and hunting trophies, the food is surprisingly innovative with regional and traditional ingredients presented in imaginative ways.

Switzerland claims the highest number of Michelin Stars per capita so take advantage of this by taking a pleasant hour cruise from Lucerne to Vitznau to dine at the two Michelin starred Focus (www.restaurant-focus.ch). Savour the 9-course seasonal menu served up every night by Nenad Mlinarevic, one of the new stars of the Swiss culinary world while sipping on wine from a cellar that is the envy of Europe and taking in the magnificent view of Lake Lucerne.

Convivial and cozy, the Rathaus Brauerei (www.rathausbrauerei.ch) hums with locals and out of towners, who come here for the home-brewed beers and town-hall atmosphere. At least four beers are offered at any given time but the establishment's most popular brew is its Rathaus Bier. Comfort food goes great with the brews and the restaurant serves up rib-sticking local sausages, fried fish and schnitzel.

WHERE TO STAY

The place to stay in Lucerne, the Palace Hotel (www.palace-luzern.ch) offers Belle Epoque beauty and decadence which have become almost extinct. Palatial rooms tempered with modern refinements and jaw dropping lake or Alpine views make a stay here an unforgettable experience. Its in-house restaurant Jasper is reputedly one of Lucerne's culinary marvels, combining exquisite service, elegant interior design and perfectly cooked modern Mediterranean cuisine 







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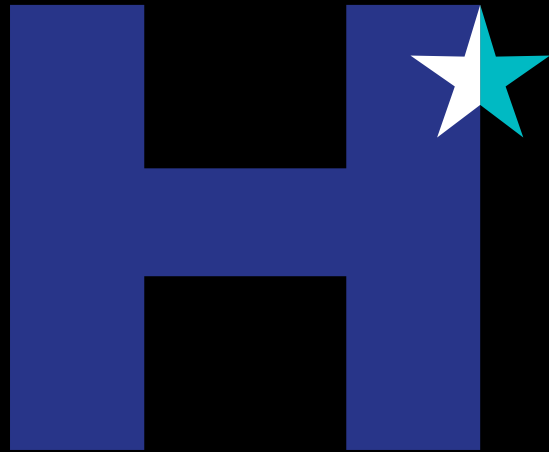
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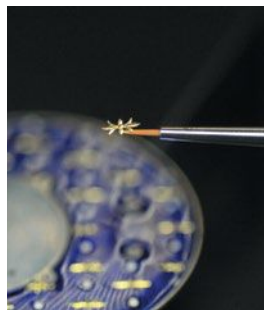
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QUIZ

EYE CANDY

Lest you think only movements and cases feature artful innovations, here's a test to remind you of the aesthetic side to all this forward thinking

1. The main advantage of enamelling is that colours stay bright for a long time. True or False?
2. Can silicon components be hand-finished?
3. Brass is most commonly used for the bridges and mainplates. Why are these elements white?
4. Blue steel is often used for hands. What temperature must steel be heated to arrive at this distinctive colour?
5. Which enamelling technique provides a glaze that resembles stained glass?
6. What type of engraving is considered the noblest amongst these three: manual, mechanical or chemical?
7. What is the name of the tool used to perform hand-engraving?
8. What is the basic component of enamel?



ANSWERS: 1. True; 2. No, but some brands are trying to make it happen; 3. They are rhodium-plated; 4. 290 degrees Celsius; 5. Plique-à-jour; 6. Manual; 7. Graver; 8. Silica sand

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